INSTITUTE *of* STATISTICS
Oxford

Bulletin Vol. 14 *March, 1952* *No. 3*

THE FOOD SUBSIDIES AND THE BUDGET

I propose in this paper :

(1) To show what redistribution of income is likely to occur as a result of the present budget.

(2) To examine the effects that the food-subsidies have had on the distribution of real income.

(3) To discuss the place of the food-subsidies in general economic policy.

(1) THE BUDGET OF MARCH 1952

The main changes proposed in the budget are :

1. To reduce the income tax, by raising the personal and dependants' allowances, and changing the lower rates.
2. To reduce the food subsidies from £410m. to £250m. a year.
3. To increase family allowances from 5s. to 8s. per week.
4. The imposition of an excess profits levy, together with a reduction in profits tax.
5. An increase of 7½d. a gallon in the petrol duty.
6. A flat duty of £12 10s. on all cars.
7. Increases in entertainments duty on cricket and football, and a reduction in taxes on racing.
8. Increases in old age pensions and war pensions.
9. Increases in some postal, telephone and telegraph charges.
10. A graduated scale of purchase tax.
11. A reduction in Stamp Duties on property transfers.

The effects of these changes are estimated (in a full year) as :

Exchequer Gains	£m.	*Exchequer Losses*	£m.
Excess profits levy	100	Income tax	228
Food subsidies	160	Family allowances	37
Postal charges	14	Pensions	80
Petrol taxes	66	Cars and entertainment	2
		Stamp Duty	4
	340		351

The net change in taxes collected and benefits received for the whole economy is only £11m. : which is negligible. That is to say, the effects of the budget as a whole can be treated as being—in the first instance—entirely redistributive. This statement agrees with the Chancellor's own statement that total personal consumption will be about the same as last year. If we ignore the effect of the import cuts on the pattern of consumption,[1] and all the secondary effects, we can ask how the shares of families of different size and income in an unchanged volume of consumption are likely to be affected.

The most controversial measure, and the one that seems most likely to affect the distribution of real income is the reduction in the food subsidies. It is impossible to isolate the redistributive effect of the changes in the food subsidies alone, since we do not know precisely which concessions are intended to offset the reduction in subsidies.[2] The reduction in food subsidies is £160m. : family allowances have been increased by £37m., the increase in pensions—the details of which are not yet available—will be of the order of £80m. The concessions on unearned income are intended to 'help primarily retired people and those living on small fixed incomes.'[3] The cost of this is estimated by the Chancellor at only £1m. These four items together cannot be treated solely as redistributive, for their combined effect is to reduce total disposable income by about £42m. in a full year. And if we go to the other extreme, and add in the effect of all the income tax changes, total disposable income is increased by some £180m.

The most sensible course is to consider the redistributive effect of the budget as a whole. This involves making some rather drastic assumptions about one or two difficult items, but the main effects stand out quite clearly, and the redistribution of income implied by the budget is sufficiently important to make such a general assessment well worth while. The effect on disposable income of the changes in entertainment duties and Stamp Duties is only £5m.; their redistributive effect is very small. It will not alter our analysis if we neglect them. The most difficult problem is to decide what redistributive effect the changes in purchase tax are likely to have : we lack the necessary information on how expenditure on clothing, footwear and durables is spread among the different income groups. The most sensible way of dealing with this is to estimate the redistributive effects of the fiscal changes, and then see how the changes in the purchase tax regulations are likely to modify these conclusions.

The method to be followed is to discuss what the budgetary changes imply for particular families, and to try and find meaningful dividing lines, measured in terms of size of family and the level of family income, which will separate the losers from the gainers.

Let us begin with the food-subsidies. The loss to a particular family from the rise in food prices depends on how much of the subsidised foods the family consumes, and on the ease with which the family can escape the rise in prices by altering the pattern of its consumption. The rationed commodities on which the subsidies have been reduced are meat, tea, margarine, cooking fat, cheese, eggs, bacon and sugar ; the main unrationed foods affected are bread, flour and milk. The elasticity of demand for the rationed foods and for bread is extremely small : the elasticity of demand for milk may be higher,[1] but it is certainly well less than unity. This suggests that we shall not be distorting the situation too much if we assume[2] that expenditure on subsidised goods is uncorrelated with income, and that the price elasticity of demand for them is zero. This means that the benefit to any household from the subsidies depended entirely on the number in the family.

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[1] The Chancellor himself was very reticent about this.

[2] The *Economist's* statement that 'exactly half the £160m. saved from these indiscriminate subsidies is to be given back to the needy' (*Economist*, March 15th, 1952, p. 665) is not very much help. It ignores too much.

[3] The Chancellor of the Exchequer. *The Times*, March 12th, 1952.

The reduction of £160m. in the total subsidy bill implies an increase in the cost of buying the same quantity of food of 1s. 2d. per head per week.[3] This is almost exactly equal to £3 a year for each member of the family.

The changes in income tax can be discussed for representative income-tax families of different sizes and incomes by using the information given in the Financial Statement. The changes in family allowances are also quite straightforward; the increase is 3s. per week for each child after the first, which amounts to £7.4 per annum. We cannot add together directly the income-tax reliefs taken from the Financial Statement and the increased family allowances : the family allowances are subject to tax, so that we have to correct the figures in the tax tables to allow for these increases in taxable income.

The first step is to put together the gains from increased family allowances, income tax relief and the losses from the reduction of the food subsidies for representative families. Those with less than two children get no family allowances, so that the information in the Financial Statement only needs correcting for families with two or three children. Unfortunately we have no information on the tax liabilities for those with more than three children, but we can assess what will happen to such families reasonably well. A family with four children loses about £18 from the higher cost of food : it gains £22 4s. from the increase in family allowances. So that if the family with four children or more paid no income tax in 1951–52, it gains from this part of the budget. If it did pay income tax in 1951–52, the budget reduces its income tax liabilities. The new income tax reliefs will more than offset the increased liability to tax due to the increase in family allowances. For families with three children or less, and single persons, we can tabulate the effects as follows :

[1] When the price of milk was last raised the quantity bought did not fall in anything like the same proportion.

[2] The realism of these assumptions is discussed more fully in the second part of this paper.

[3] The Chancellor stated that the increased cost of food would be 1s. 6d. ; 4d. of this can be attributed to higher costs ; 1s. 2d. to the reduction in subsidy.

Income all Earned Income

1. *Single Persons—* *Income*	*Gain from Income Tax* £	*Loss on Subsidy* £	*Net Gain* £
200	2	3	— 1
225	4.75	3	+ 1.75
500	18	3	+ 15
1,000	36	3	+ 33
2. *Childless Married Couples*			
250	1.5	6	— 4.5
300	4	6	— 2
350	9	6	+ 3
500	15	6	+ 9
1,000	41	6	+ 35
3. *Married Couples with One Child*			
300	nil	9	— 9
350	3	9	— 6
400	8	9	— 1
500	18	9	+ 9
1,000	48	9	+ 39

4. *Married Couples with Two Children*

Income £	*Gross gain from Income Tax*	*Gain from Family Allowance*	*Extra Tax Liability*	*Loss on Subsidy*	*Net Gain*
£	£	£	£	£	£
400	nil	7.4	nil	12	— 4.8
500	12	7.4	1	12	+ 6.4
1,000	55	7.4	3	12	+47.4
5. *Married Couples with Three Childfren*					
500	nil	14.8	nil	15	— 0.2
600	15	14.8	2	15	+ 13.0
1,000	54	14.8	6	15	+ 58.0

This tabulation brings out the critical levels of income at which losers become gainers. Pensions will rise sufficiently to offset the increase in the pensioners' food Bill, but apart from pensioners, all those who paid no income tax before the Budget must be much worse off. Those families with three children or less that paid very little income tax before will find that the higher cost of food more than cancels the gains from tax relief.

The Financial Statement also gives figures for the tax liabilities of those with income entirely derived from investments. This allows us to assess how effectively the Chancellor has assisted ' retired people and those living on small fixed incomes ' with a ' well-deserved measure of relief to people on whom the cost of living is bearing and will bear very hardly.'[1] A single person with an income entirely from investments of £140 a year gains £1 10s. in income tax relief and loses £3 on the food subsidies. With £150 a year the single person gains £4 10s. in tax relief and still only loses £3. For a married couple with no dependent children, those with £190 a year or less are poorer by the £6 loss from higher food prices. At £225 a year the retired married couple still lose—unless they are eligible for higher state pensions : the loss on the subsidies is £6, and the tax relief only £5 5s. Mr. Butler's fixed income receiver must have about £145 a year if he (or more probably she) is single, and about £230 a year if he is married in order to benefit.

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[1] *The Times*, March 12th, 1952.

We have so far taken no account of the effects of the increase in petrol tax, motor vehicle duties or postal charges. It is possible[1] to allocate the incidence of the higher duties on hydrocarbon oils between different classes of consumer. The £66m. will be divided roughly as follows :

	£m.
Public transport	10
Industrial and commercial transport	27
Private cars :	
Attributable to business purposes	16
Attributable to private persons	6
Agriculture, aviation, industrial solvents, etc.	7
	£66m.

Private motorists lose about £6m. from the higher petrol tax and gain £1m. from the introduction of the flat-rate duty on older cars. The person who owns a post-1946 car with a petrol consumption of 25 miles to the gallon will pay an extra £2 10s. in tax on the vehicle and another £1 in petrol tax for every 1,200 miles he drives. If he is single, he can drive 1,200 miles in the year and still gain from the Budget as long as he earns more than about £480 a year. If he is married with two children he gains as long as he earns more than about £600. The private motorist belongs largely, but not exclusively, to those whom we classified previously as gainers. Unless he is someone who lost, or only just gained, from the changes in food subsidies, income tax and family allowances, the gains by income tax relief more than offset the increased cost of motoring. The rise in the taxes on private motoring simply reduces slightly the degree of redistribution to the higher income groups. The effects of the higher fuel cost for public transport will be either to reduce profits or to raise prices. If we assume that the demand for such transport is extremely inelastic, the effect of the increase in tax will be to raise fares by the amount of the tax. The result of this will be to make some people who just gained from income tax relief and increased family allowances net losers after all.

The increase in industrial and commercial transport costs will have the same effect : to raise the price paid to the final consumer, provided that demand is inelastic. If we suppose that the whole of the tax will be passed on to the consumer, the cost of buying the consumer goods and services that were bought in 1951 will be increased by some £50m. This is equivalent to a general increase of a little more than half of one per cent in all retail prices. If we assume that the incidence of a *general* increase of this sort will be roughly in proportion to people's expenditure,[2] we must increase our critical income levels by this half of one per cent.

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[1] *Economist*, March 15th, 1952, p. 666, gives rough estimates, which have been adjusted to reconcile them with the expected increase in revenue.

[2] This treatment follows that of Barna, *The Redistribution of Income through Public Finance in 1937*, pp. 181–2.

The next fiscal change to be considered is the excess profits levy, and the reduction in profits tax. In so far as this falls on undistributed profits, there is no effect on disposable income, and hence no effect on the distribution of consumption. If dividends are affected, then the disposable income of equity-holders (but not necessarily their consumption) is reduced.

Since it is the small rentier who tends to hold his capital in fixed interest securities and house property, and the bulk of ordinary shares are held by people in the higher ranges of income before tax,[1] there may be some tendency to reduce the gains to people in the higher income groups from income tax concessions. If one maintains that undistributed profits should be treated as income accruing to equity holders then the whole of the £100m. increase in taxation should be deducted from the income of those holding shares in companies that reduce their dividends. This argument is probably a valid one for many purposes, but it seems unrealistic to adopt it here, where we are discussing the redistribution that is likely to occur in the near future. The excess profits duty may prevent dividends rising; it is unlikely to reduce them appreciably in the short run.[2]

The final qualification to be made is the effect of the new purchase tax scheme. Instead of a two-tier system whereby certain Utility goods[3] were exempt from tax, or in one or two instances chargeable at a reduced rate, and all other goods subject to tax were chargeable at a flat rate, the Chancellor proposes to introduce a sliding scale of duty. All goods of less than a certain price will be exempt, and those above that price will be taxed only on the excess over the exemption price. The effect of this is to increase the price of better quality Utility textiles and footwear, and to reduce the price of the lower quality non-Utility items. The total yield of purchase tax is expected to be the same as before.[4]

This piece of information allows us to infer that the prices at which the exemption levels have been set are the median prices.[5] The proportion of Utility production to total home supplies of some of the principal commodities affected during April to June 1951 were:[6]

Non-wool furnishing fabrics	50%
Cotton and linen apparel cloth	54%
Pillow cases	77%
Sheets	83%
Wool cloth	87%
Footwear (non-rubber)	98%

These figures refer to output, not expenditure, and the new tax regulations refer to prices; nevertheless, it is almost certain that those commodities in which the bulk of production was Utility will bear more purchase tax. For there must have been several lines at above the median price (pre-tax) that were exempt from purchase tax, and not many non-utility lines at less than the median price. This suggests that the retail prices of the footwear, wool cloth, and sheets and pillow cases that were previously ' better quality Utility ' will rise. Some of the non-Utility cotton and linen goods, on the other hand, will fall in price, since they will be exempt from tax.

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[1] Barna, *op. cit.* Appendix E.

[2] The rise in replacement costs at the same time as the removal of the initial allowances may squeeze dividends, however.

[3] Wearing apparel, footwear, cloth, domestic textiles, soft furnishings and bedding.

[4] Financial Statement.

[5] Report of the Purchase Tax Utility Committee. Cmd. 8452, para. 101.

[6] Cmd. 8452 para. 20.

How is this likely to affect our critical income levels ? This depends entirely on whether the family that just gains on the other fiscal changes loses more through higher wool and footwear prices than it gains from reductions in linen and cotton prices. It would not be surprising if those who would otherwise just gain from the budget are in fact people who buy the better quality Utility goods, and will lose after all. Some people who bought non-Utility before will gain from the fall in price. In so far as the higher income groups bought non-Utility, this implies a further redistribution to the higher income groups. There is little direct evidence, but it would be surprising if the introduction of the ' D ' scheme worked to the benefit of the lower income groups. People who bought low-priced Utility lines are unaffected; marginal purchasers which were previously exempt will probably pay tax.

We can now bring together the results of our analysis as follows :

Gainers[1]

All families with four children or more.
Pensioners.
Families with three children and (earned) income of more than £500.
Families with two children and (earned) income of more than about £435.
Families with one child and (earned) income of more than about £415.
Childless married couples with (earned) income of more than about £315.
Single persons with (earned) income of more than about £210.
Single persons with unearned income of more than £145.
Married couples with no dependent children and unearned income of more than £230.

Losers

Families with 3 children and earned income of less than £500.
Families with 2 children and earned income of less than £435.
Families with 1 child and earned income of less than £415.
Families of no children and earned income of less than £315.
Single persons with earned income less than £210.
Married couples with no dependent children and less than £230 a year entirely from investments.
Single persons with less than £145 a year entirely from investments.

The direct effect of the Budget is initially a redistribution of income from poor to rich. Almost everyone with more than £500 a year gains more from the income-tax reliefs than they lose on higher food prices; this implies an increase in the share of those with more than £500 a year in total consumption. The Chancellor has stated that total consumption will be virtually unchanged : the implication is a fall in the real consumption of those with less than £500 a year. There is also a redistribution implied *within* the below £500 a year class. There is a redistribution to pensioners and families with more than four children, and away from the smaller families, but this pattern of redistribution is not pursued consistently. The single person loses until he earns £210 a year : the family of four loses until its income is about £435 a year. So that in the range £315–£415, or thereabouts, there is a redistribution from families with less than four children to larger families and to the childless. The pattern of working-class consumption between families of different sizes is to be changed in this rather curious fashion and the total of working-class consumption is to be reduced. The method of reducing consumption is to make retail prices rise faster than disposable income.

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[1] The critical income levels are obtained by interpolation from the previous calcultions.

This analysis only considers the immediate and direct effect of the budget. It supposes that the changes in disposable incomes are determined entirely by the changes in the budget, and that the changes in retail prices are quite distinct and unrelated. Both these assumptions are unrealistic. The change in disposable income is determined by changes in output, and changes in wage-rates and profit margins, as well as by rates of taxation. Increases in retail prices will affect wage-rates—either automatically, by sliding-scale cost-of-living agreements, or by increased pressure by the Trade Unions. The Chancellor's calculations assume an increase of £250m. in gross national product at 1951 prices : it is probable that about half of this will go into increasing disposable income, even if wage-rates remain constant. Higher earnings will mitigate the price rises for those workers on piece-rates whose output increases.

The fall in consumption of the ' losers ' is certain to occur only if they are unable to obtain higher money incomes. If they obtain wage increases, while the money incomes of the gainers remain constant, they can redress their position to some extent. How permanently they can reassert their position depends on the distribution of the price rises that follow the first round of wage increases. Trade Union action cannot redress the redistribution of income *within* the working class; the unions cannot easily demand increases for single men earning less than £5 15s. a week, and married men with three children earning less than £10 a week, and no increases for men with four or more children. Whether increased wage rates can prevent the fall in working-class consumption that the budget implies[1] depends on the secondary effects of wage increases. The effect of wage increases must be either to reduce profit margins, or to increase prices. If firms fix prices by a percentage mark-up on prime costs, the ratio of gross profits to wages will remain unchanged. Fixed income receivers lose by the rise in prices, profit earners do not lose unless the rate of tax on their marginal earnings is sufficiently high to prevent them increasing their disposable income in proportion to the increase in prices. In other words, wage earners can only improve their relative position if tax rates and dividend policy are such that a 5 per cent increase in the wage bill is associated with a less than 5 per cent increase in salaries and distributed profits.[1] The most likely result is a sort of see-saw process; a rise in prices reduces real wages, the fall in real wages induces a demand for higher money wages, the demand for higher money wages is eventually granted. As long as prices lag behind wage rates, this means an increase in real wages, which is obliterated as soon as prices rise again. If marginal taxes on profits are high enough, successive stages of this process will eventually cause a fall in real profits.

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[1] The Chancellor has not said that he intends to reduce working-class consumption : all one can say is that the direct implications of his budget are that a large section of the poorer classes will suffer a fall in real income.

What actual redistribution takes place depends not only on the budget, but on the changes in money incomes that these fiscal measures induce.

(2) The Food Subsidies and the Distribution of Income

In the first part of this paper we discussed the incidence of the reduction in the food subsidies by making two far-reaching assumptions : we assumed that the price elasticities of the demand for subsidised foods was zero, and that the consumption per head of subsidised foods was the same for all families. By making these assumptions it was possible to attribute a monetary ' loss ' to each family, and deduce the direction of income redistribution that might occur from changing the subsidies. There has been considerable discussion of the effects of the food subsidies on the pattern of real consumption;[2] this section of this paper attempts to examine this question in more detail.

The effect of the subsidies is to keep the price of some foodstuffs lower than they otherwise would be; and if the subsidies are not to have a substantial effect on aggregate demand an equivalent amount must be collected in taxes. What is meant by an equivalent amount of taxation depends on the particular view that is taken of fiscal policy. If it is merely a matter of ' raising the money ', then an amount equal to the subsidies must be collected, and it is of no importance if it is collected from death duties, income tax or purchase tax. If, on the other hand, the subsidies are meant to make no net contribution to effective demand, taxes must be collected in such a way so to leave the aggregate demand for consumers' goods and services unchanged. So that, if some taxation falls on savings, the amount required to neutralise the subsidies must be greater than the value of the subsidies themselves. Unless the benefit from the subsidy is exactly equal to the extra tax paid for every family, there is bound to be some redistribution of income involved. The change in relative prices and the redistribution of purchasing power must both affect the pattern—and possibly the volume—of consumers' expenditure and savings. To make a proper assessment of the subsidies, we ought to know the quantitative effect of these factors. To do this is impossible; adequate information does not exist. What can be done, is to show what has to be known if we are to make a full assessment of the subsidies; this is useful not merely because it reveals the large gaps in our knowledge of the economy, but also because it brings out the assumptions that people are making when they discuss the food subsidies.

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[1] This assumes that the changes in prices of wage goods are not very different from the changes in prices of non-wage goods.

[2] E.g. in the correspondence columns of *The Times* during November 1951.

What are the effects on the pattern of consumption and expenditure ? To ask this question is to ask for the elasticities of demand with respect to own price, other prices, and income, of all classes of commodities, not merely those which are subsidised. If cheaper milk means that people consume more of it, then, if the consumption of milk increases by a smaller proportion than the reduction in price, the amount available for expenditure on other goods is increased : if it increases more than proportionately the consumption of other goods—or possibly savings—will fall. How exactly the demand for tobacco—for instance varies with changes in the price of milk cannot be inferred from a knowledge of the elasticity of demand for milk. One would need to know the demand function for tobacco as well to know the whole effect of the milk subsidy.

It is, of course, possible to make reasonable guesses about some of the elasticities : ' intuitive elasticities ' of this sort can carry the argument a little further, but by no means the whole way. Not many people would like to guess the effect of a change in the price of milk on the consumption of tobacco.

The own-price elasticities of demand for bread and potatoes are not likely to be much above zero; the *effective* elasticities of demand for meat, bacon, tea, sugar, and butter and margarine combined are also likely to be very low, since the rations seem significantly less than the quantities that would be demanded at the existing prices in a free market situation.[1]

The other important subsidised foods are rationed cheese, milk and eggs. The effective elasticity of demand for cheese is probably well below unity, though a sufficient increase in price might well cause some reduction in the take-up of the ration, if people think that the quality is unsatisfactory. This is more likely to be true as long as there is a plentiful supply of imported (non-subsidised) cheese; so that it is possible that the import cuts may reduce the elasticity of demand for rationed cheese. The demand for eggs might be rather more elastic, but the ration is small enough, and the meat ration is small enough, to make the effective elasticity of demand for eggs as well below unity. A rise in the price of both butter and margarine might produce a bigger take-up of the margarine ration and a smaller take-up of butter, but the elasticity of demand for the two taken together is likely to be very low.

The demand for milk is more complicated, since the rate of subsidy differs for different classes of people : expectant mothers and children, for instance, get a certain quota which is more highly subsidised. Moreover, there are three grades of milk which are sold at different prices : an increase in price for all those grades might easily produce a substantial attempt at substitution towards the lower quality milk. Whether the substitution could in fact take place depends on the possibility of substitution on the supply side. It is probable that the demand for milk is the most elastic of the demands for subsidised foods, but to argue that the demand is of more than unit elasticity would be most unrealistic. The most likely case of elastic demand would be the demand for milk of poor families with several children, where the reduction of the differential subsidy for children's milk might have a considerable effect. Whether these cases are sufficiently numerous to make the national elasticity greater than unity, however, is hard to say.

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[1] The Ministry of Food gives some information that substantiates this, and subsequent arguments. The estimated take-up of rationed foods in Great Britain at the end of 1950 was : Tea, 100%. Sugar, 100%. Butter, 99%. Bacon, 98%. Cheese, 94%. Margarine and Cooking Fats, 90%. Ministry of Food Bulletin, Feb., 1951.

It seems probable that the elasticity of demand for subsidised foods as a whole is much nearer zero than unity, and very unlikely that any of the individual elasticities is unity or greater. This means that the effect of the subsidies must be rather to reduce expenditure than to reduce the volume of consumption. The seemingly drastic assumption we used to discuss the budget may not have been so very wide of the mark.

The general effect must have been to increase the disposable income of those families benefiting from the subsidies, and hence to increase their share in total consumption. Here it is not so much price elasticities as income elasticities that are relevant. If the income elasticities of demand were the same for the families that benefited as for those that lost by the subsidies, then the direction of aggregate consumers' demand would have been unchanged : the gainers would be buying the same goods as the losers would be buying if there were no subsidies. This is a very unlikely situation. Ignorance of income elasticities prevents any detailed analysis. The next step must be to examine the redistributive effects in more detail, to see if it is possible to say more explicitely who gains and who loses. This means that we have to set the benefit to a household from the subsidies against the increased taxes it has to pay towards financing the Ministry of Food's trading losses.

The rationing of most of the subsidised foods means that—as long as all households buy almost the whole of the ration—benefit from the subsidy will depend primarily on family size, and not vary with income.[1] If the ' poor ' consume more bread and potatoes than the ' rich ', the benefit from the subsidy will fall as household income rises. In so far as consumption of eggs and milk rises as income rises, so does the benefit from the subsidy. We cannot say how important either of these effects is : they may not be large, and they go in opposite directions. So we conclude that the *principal* determinant of how much a household benefits is the size of the household. So much was true both before and after the reduction of the subsidies.

If we are to say how much a household has had to pay in taxation because of the food-subsidies we have to make some assumption about *what*

[1] Unless income and family size are correlated.

taxation was raised to finance the subsidies. As no-one believes that taxation has been ' earmarked ' in this way, this kind of argument is not really very plausible. Suppose the subsidies were met by the Exchequer from income tax.[2] The amount of income tax paid depends on the size of the family, the size of the income and whether the income is earned or not. The benefit from the food-subsidies increases directly with family size; for families of given income, tax liability falls as family size increases. The net effect has been to redistribute income from smaller families to larger, up to some level of income at which the increased incidence of income tax more than offsets the benefit from the subsidy even for the larger families. So that the general effect must have been to redistribute income from income-tax payers to non-income-tax payers, and to larger families. In this situation the gainers must have been the larger less well-to-do families, and any other family that pays no income tax. These are precisely the classes that lose by the budget of 1952. But where the line fell between gainers and losers there is no means of saying. For if there had been no food-subsidy there would have been, say, £400m. less income tax, but who were these marginal income tax payers ? To reduce the income tax by £400m. one could raise the exemption limit, raise the earned income allowance, raise dependents' allowances or reduce the standard rates. The answer to the question of who used to gain depends on who is considered to have been the marginal taxpayer. The only people who must have gained were those who paid no income tax. All those people—except for pensioners—will lose by the present budget.

The alternative hypothesis is that the revenue for subsidies was raised by higher indirect taxation. Again, the measure of redistribution achieved will vary according to which indirect taxation is assumed to be marginal. We know very little about the incidence of indirect taxation, and who is the marginal indirect taxpayer is anybody's guess. The principal taxes are those on drink and tobacco, and the purchase tax. Expenditure on drink and tobacco rises as income rises, though probably not proportionately. The income elasticity of demand for drink and tobacco is almost certainly well above zero. In the lowest income group expenditure is directed to the cheaper (small) cigarettes, and cheaper pipe tobacco, and to the less expensive kinds of beer. The tax paid depends on the volume of expenditure rather than the quantity consumed, so that expenditure on drink and tobacco increases more rapidly that quantity bought as one moves up the income scale. Nevertheless, the elasticity is unlikely to be above unity.

Purchase tax was collected largely, but not exclusively, on goods with a high income elasticity of demand, and did not include Utility goods. It is most likely that the clothing and footwear bought by poorer families was almost entirely Utility and tax free :. the exemption from purchase tax of almost all children's wear tended to benefit the larger family. It is certain that the incidence of purchase tax rose sharply with family income, and the smaller family would pay relatively more than the larger, except in so far as the purchase tax on toys tended to offset the exemption of children's clothing and footwear.

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[2] The Chancellor does not claim that he reduced income tax to compensate for reduced subsidies.

The overall picture of gains and losses from the food subsidies that emerges on the indirect tax assumption is very much the same as that we deduced on the income tax assumption. The benefit increases with family size and decreases as income rises. And we have still no evidence on the break-even point: in fact, the break-even point is determined by what one assumes the marginal taxes to be.

If one examines the effects of the whole of public finance on the redistribution of income in recent years, a fairly clear pattern emerges. Broadly speaking, there have been direct payments of pensions and National Assistance to the lowest income groups, expenditure on education health and other social services, and the food subsidies, which have been offset by high direct and indirect taxes. The benefit from the food subsidies and the social services is highly correlated with family size, the incidence of taxation is correlated with family income. The pattern until 1952 has been a redistribution from rich to poor and—except for those receiving direct transfer payments—from single persons and small families to larger families.

This general pattern of redistribution stands out very clearly, although we do not have sufficient information to say exactly where the ' break-even ' point lies. In the first part of this paper it was possible to analyse the redistributive effects of the Budget because the net effect of all the changes on balance was negligible, and because the Chancellor was assuming there would be no change in aggregate consumption. In this section, we have examined the general redistributive effects of the subsidies on two assumptions, and the same general pattern emerged in both instances: a redistribution from rich to poor and from small to large families. What Mr. Butler has done is to reverse this pattern of redistribution that wartime and post-war public finance had established. Less is to be redistributed from rich to poor; the redistribution from the small to the larger family has been maintained only for families with four or more children.

(3) The Food Subsidies and Economic Policy

The foregoing discussion has been entirely devoted to the effects of the food subsidies on the distribution of real income and consumption. In fact they were never intended solely, or even primarily as a redistributive device. They originated in the wartime policy of price stabilisation.[1]

Subsidies to prevent increases in retail food prices began before the end of 1939; but the definite policy of price stabilisation was first enunciated by Sir Kingsley Wood in his Budget speech in April 1941, and was explained in more detail in the White Paper on ' Price Stabilisation and Industrial Policy ' of July 1941. The objects of price stabilisation were two-fold: to ensure adequate supplies of essential foods at prices within reach of the lowest-paid workers, and to prevent large increases in wage-rates that would result from a rapid rise in the cost of living. The policy was essentially designed to reduce the dangers of a cost-inflation from rising money wage-rates, and to prevent such price inflation as was inevitable in wartime causing a more unequal distribution of real income. The policy continued unchanged until Sir Stafford Cripps' Budget of April 1949, when it was announced that he amount paid in subsidies would not be allowed to exceed a definite ceiling: £465m. in 1949, £410 in subsequent years. Mr. Butler has reduced the ceiling to £250m. a year.

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[1] Cf. E. F. Nash, ' Wartime Control of Food and Agricultural Prices ' in ' Lessons of the British War Economy ' (Ed. Chester), pp. 200–238.

When Sir Kingsley Wood introduced the price stabilisation policy he proposed ' to prevent any further rise of the Cost of Living Index number . . . above the present range of 125—30 in terms of the pre-war level. He hoped that this would create conditions which would ' enable the wages situation to be held about where it is now.'[1] The total amount paid in subsidies[2] increased steadily:

Food Subsidies 1939–40 *to* 1949–50[3]

	£m
1939–40	15.8
1940–41	63.1
1941–42	95.8
1942–43	142.6
1943–44	182.5
1944–45	195.7
1945–46	265.5
1946–47	325.0
1947–48	391.6
1948–49	484.5
1949–50	469.0

The policy of stabilising the index number remained virtually unchanged until the introduction of the interim index of retail prices in June 1947. The attitude of the Labour Government to the subsidies as a factor in stabilising prices and hence wages was made clear in the Budget debate of April 1949. Sir Stafford Cripps said that in the previous Budget he had set a limit of £400m. to the food subsidies in 1948: he had allowed the subsidies to rise well above this because of the introduction of the policy of stabilising wages, prices and profits. The Prime Minister's statement on Personal Incomes, Costs and Prices of February 1948 was intended to stabilise wage rates. It was considered that such a policy would have little chance of success if it was associated with a significant increase in retail prices, particularly of

[1] *Hansard*, April 7th, 1941.

[2] Excluding subsidies to agriculture that do not directly reduce the prices of agricultural produce. These are defined in the notes to Table 25 of Cmd. 8203.

[3] Nash op. cit.: Ministry of Food Trading Accouts.

foodstuffs. So the subsidies were allowed to rise. The success of this policy was quite considerable.[1]

Cost of Living and Wage Rates

	Av. 1946	*Av. 1947*	*Av. 1948*	*Av. 1949*	*Av. 1st half 1950*	*1950 3rd Qr.*	*1950 4th Qr.*	*1951 1st Qr.*	*1951 2nd Qr.*	*1951 3rd Qr.*	*1951 4th Qr.*
General wage index (1946=100)	100	104	109	112	113	113	116	119	121	123	132
Cost of living	100	107	116	120	122	123	125	128	133	137	140

The large increases in indirect taxes in the Budget of April 1947 reduced real wage rates. After this wage rates kept pace with changes in retail prices until the 'Personal Incomes' statement. For the next two and a half years they rose more slowly. Wage rates in the first half of 1950 were only 4 per cent above the average for 1948. The rise became much more rapid after the rise in retail prices in third quarter of 1950; the increase in retail prices made it impossible for wage restraint to continue.

Sir Stafford Cripps' reasons for putting a ceiling on food subsidies are interesting, since they bring out the dilemma that has faced every Chancellor since the war: the dilemma arises fundamentally, over the question of how to prevent inflation. He put forward two arguments: the first was, that if the food subsidies were not to be inflationary, then an equivalent amount would have to be raised in taxation; this would have created extremely difficult problems, since marginal tax rates were already extremely high. The second argument was that 'food prices were unrealistic'.[2] Later in the debate the Economic Secretary to the Treasury defended the subsidies as being both anti-inflationary and 'a weapon of social welfare'.[3] Sir Stafford's change in policy was the result of a change in general economic strategy. Wartime economic policy was essentially one of suppressing inflation. Consumption was controlled by rationing, and by direct control of the volume of consumers goods produced. The pressure for higher money increases was restrained, though not prevented, by price controls and subsidies, and the excess demand could spend itself either on a few goods on which indirect taxes were high, or accumulate as personal savings. No attempt was made to close the *ex-ante* inflationary gap between supply at existing prices and personal disposable income. The only importance of the gap was that it should not be too big; no one believed it could be closed altogether. Food subsidies had an important part to play in suppressing inflation.

The disinflationary budget of 1948 marks a new stage in economic policy. Output was increasing rapidly, the worst bottle-necks of the immediate post-war period had been removed, the economy was moving back towards a possible balance between supply and effective demand. The principal problem was to increase exports to restore equilibrium to the balance of payments. The new policy was to maintain sufficiently high marginal tax rates while output went on rising; this would force increases in output into exports. The important thing was to prevent possible exports being pulled back into the home market. The success of this policy between 1948 and 1950 is clear: industrial production rose by 16 per cent, exports increased by 27 per cent while personal consumption rose only 5 per cent. The food subsidies were still important, rapid rises in retail prices were likely to induce large wage demands: the effect would be higher export prices, a pull of exports back to the home market, and inflation from the cost side, instead of the demand side. The dangers of price inflation being generated by excess demand were less in an economy where there was quite a wide range of price control, some rationing, a great deal of resale price maintenance, and with manufacturers tending to fix prices on a cost-plus basis. The threat of a cost inflation was far more serious; the chief danger from excess demand was not it would cause a price inflation, but that it would divert output and resources to the home market, and create additional balance of payments difficulties. Sir Stafford Cripps had to stabilise prices to prevent wage increases, and to reduce effective demand by high tax rates. This meant holding an uneasy balance between the desirable level of subsidies and the limits to taxable capacity.

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[1] Cf. Seers. The Levelling of Incomes, pp. 55-56. The figures of Cost of Living and Wage Rates continue Mr. Seers' tables up to the end of 1951.

[2] *Hansard*, April 6th, 1949.

[3] *Hansard*, April 12th, 1949.

This policy, together with the exhortations to the trade unions, only collapsed in the autumn of 1950, when prices started to increase rapidly.[1] Mr. Gaitskell was faced with very large increases in import prices and the need—given the rearmament programme—for a small fall in personal consumption. This was to be achieved by allowing retail prices to increase sufficiently to absorb increased costs and assumed that it was possible to prevent wages rising to the same extent.

The Economic Survey for 1951 assumed that retail prices would rise by 7½ per cent and wage rates by 7 per cent.[2] Superficially, Mr. Gaitskell's assumption that prices would rise faster than wage rates appears to have been correct: the wage-rate index for 1951 was 8 per cent above 1950, while retail prices had risen by 10 per cent. However, if one looks at the quarter-to-quarter movements, it is quite clear that the annual averages are misleading.

Cost of living and Wage Rates, 1950–51

	1st half 1950	*1950 3rd Qtr.*	*1950 4th Qr.*
Wage rate index (1950 = 100)	100	100	103
Cost of living (1950 = 100)	100	101	102

1951			
1st Qr.	*2nd Qr.*	*3rd Qr.*	*4th Qr.*
105	108	110	118
105	109	112	115

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[1] Cf. the extremely able analysis of the Economic Survey of Europe in 1950, pp. 155–157

[2] Cf. Economic Survey of Europe in 1950, p. 156.

The eight points rise in the wage-rate index in the last quarter of 1951 means that wages have outstripped prices : the process is essentially a see-saw one, as our earlier analysis showed.

The policies pursued by Mr. Gaitskell, and continued by Mr. Butler are—in this respect—very similar. Both involve an attempt to reduce consumption by higher retail prices. This is equivalent to allowing inflationary pressure to work itself out in higher retail prices : it presupposes that an actual inflation is less undesirable than an inflationary gap. For such a policy to succeed, increases in wage rates must lag behind increases in retail prices. There is no reason to suppose that Mr. Butler will have any more success in achieving this than Mr. Gaitskell had.

Mr. Butler's policy of reducing food subsidies implies the final abandonment of the policy of disinflation and price stabilisation, just as Sir Stafford Cripps' ceiling to the subsidies and disinflationary budgets implied that the policy of suppressing inflation was being abandoned.

The problems of the next few years are primarily structural : problems of increasing coal and steel output, of excess demand for the products of the steel-using industries, and a relative slump in textiles. This makes a crude ' inflationary gap ' analysis rather unrealistic, and suggests that the policy of disinflation of 1948–50 is no longer appropriate. However, a policy of trying to restrict consumption by higher prices will have serious social repercussions : if rearmament and the balance of payments crisis require that personal consumption should not increase, it becomes even more important that the burden should be equitably distributed. The reduction of the food subsidies makes equitable distribution more difficult; the most likely effect is to induce further increases in wage rates. It is easier to control prices than to control wages, and it is possible to control the major scarce commodities directly; a policy of suppressing inflation, which uses subsidies and price controls to prevent inflation from the cost side might be both safer and more equitable.

C. R. Ross.

TEN YEARS OF FAMILY SURVEYS

In a previous paper[1] we were able to show that the small annual surveys into working-class household expenditure, carried out by the Institute of Statistics from 1940 to 1949, yielded data of food consumption that compared well with others derived from very much larger surveys.[2] However, during those years the purchases of many foods by the individual housewife were strictly limited by rationing, a fact which was bound to affect favourably the validity of small samples in this field. Thus while we could point to the obvious usefulness of the small survey for the purpose of ascertaining the family consumption of essential foods under conditions of general shortages and rationing, no conclusions could be drawn regarding the validity of small samples of household expenditure in general. In the present paper we shall survey the whole field of household expenditure as represented in the small samples, and we shall try to discover whether, and if so, to what extent, small samples of family expenditure can provide data that transcend the scope of the actual samples.

1. Scope and Method of the Inquiry

The inquiry—or, rather, the series of inquiries—was started by Sir Arthur Bowley[3] in 1940. It was intended to provide information about the expenditure patterns and the standard of nutrition of working-class families with dependent children, under war-time conditions. On the assumption that the war would not last very long, it was hoped to find about 200 families that would be willing to keep a fortnightly account of their daily expenditure twice a year. The first of these surveys was undertaken in May 1940; it was based on 168 family budgets. The second survey, in October 1940, rested on only 106 usable budgets, many of which came from ' new ' families, *i.e.*, families that had not contributed to the previous survey. In June 1941, when the third survey took place, only 63 families came forward; of these, 21 were 'new' families. It was evident that the strain of the war was too heavy on most families for the housewife to show much interest in a routine survey, however plausibly the need for such a survey might be explained to her in a circular letter. In order not to have to abandon the whole plan it was decided to attempt a survey only once every year, and, further, to try a much more personal approach to the housewife—to encourage her to write about her problems of housekeeping and to ask questions to which we would reply.[4]

This very much improved the response. The number of satisfactorily completed accounts rose to 163 in 1942 and in 1944 reached a peak of 226.[1] The general method of sampling employed since 1942 has already been briefly set out in the paper on the consumption of foods, referred to above. In 1940 and 1941, the method was broadly the same; but since it was assumed that for each survey the accounts would come in the main from the same families—thus assuring consistency—the entries in the account books kept by the housewives were checked in detail only as regards the figures of outlay, and the material was handed over in batches to a number of computors. In later years the work became far more centralized; moreover, a system of very careful cross-checking of all the entries in the various accounts was evolved, and any point that appeared doubtful was verified or, failing verification, the account in which it occurred was discarded. Hence the margin of possible error was certainly wider in the earlier years.

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[1] T. Schulz, *Working-Class Food Consumption from* 1942 *to* 1949. Bulletin, Vol. 14, No. 2.

[2] For reasons explained in the paper cited, figures of food consumption in 1940 and 1941 were omitted from this summary survey.

[3] Then Director of the Institute.

[4] These notes assisted sometimes considerably in the checking of the accounts, since they provided additional information on the local supply and the prices, of food and of non-food items.

The families were requested to state in detail their household expenditure, but it was explained to the housewife that the data she supplied would be more valuable if they included a statement of the total family income during the period under survey. Figures of family income were given by some of the families from 1943 onwards. The figures of household expenditure collected by us represented that part of the total family income which was disbursed by the housewife; it included the outlay on housing, and on fuel and lighting, incurred during the weeks of the survey, whether or not these payments were, in fact, made during that period. Rent was usually paid weekly, but rates, house-purchase instalments, mortgage payments, gas and electricity bills, were often discharged at much longer intervals. In all these instances the last payment that could be accounted for by the housewife was made the basis of our computations of weekly cost.[2] Any large item purchased out of savings was disregarded; if it was paid for partly out of current income, only that part of the outlay was included in our tabulations.

In the following we shall consider the expenditure patterns of three groups of families, *viz.*, all the families of each annual sample; the 'unchanged' families; and those of the 'unchanged' families that also stated their income in two successive years.[3] The numbers of persons per family are shown in Table I. The figures in brackets in the groups of the U and the I families were computed in conjunction with the data for the following year.[4]

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[1] The series of surveys was provisionally closed in 1947. Since, however, the economic situation made it desirable to obtain further data, a small number of families agreed to supply budgets also in 1948 and 1949. In each of these last two years all the families kept an account for 4 weeks, in order to make the data as reliable as possible.

[2] This clearly introduced an element of error: yet it was found to be a much more satisfactory method than to try to calculate the cost of the actual consumption of gas and electricity from meter readings, or to compute it from bills for the corresponding period in the preceding year.

[3] By 'unchanged' families we mean those families that contributed an account in two successive years and that in both years comprised the same persons. In the following we shall write U families for 'unchanged' families and I families for 'unchanged' families that stated their income.

[4] All the figures shown by us for 1940 were derived from the second survey in that year.

TABLE I

Structure of Families

	All		*U*		*I*	
	Families	Persons per Family	Families	Persons per Family	Families	Persons per Family
	No.	No.	No.	No.	No.	No.
1940	106	4.7	(29)	(4.9)	—	—
1941	63	4.9	29	4.9	—	—
1942	161	4.8	14	4.2	—	—
1943	208	4.7	46	4.4	—	—
1944	226	4.7	84	4.8	(35)	(4.6)
1945	155	4.6	85	4.1	35	4.6
1946	151	4.8	59	4.4	50	4.1
1947	163	5.0	55	4.6	34	4.2
1948	65	4.6	35	4.8	17	3.9
1949	64	4.6	37	4.3	15	4.2

When we try to decide how far our figures are representative, our problem is to find other figures with which we can compare them. No comprehensive inquiry into family expenditure has been undertaken since the Ministry of Labour survey in 1937–38. That inquiry—a very large random survey—covered the expenditure of urban working class families, which, on the average, contained fewer persons and, in particular, fewer dependent children than the average families of our samples. The expenditure which it analysed had been incurred in a market unencumbered by rationing and shortages. All this must be borne in mind when later in this paper, we refer in detail to data based on this Ministry of Labour survey and compare them with our data. In the first instance, however, it seems advisable to look a little more closely into the internal structure of our own samples.

'Household expenditure' is a highly elastic term which, in different families, may reflect widely different practices. At one extreme, there is the housewife who receives the earners' pay packets and returns to them only their pocket money. Such a housewife may even buy the tobacco, cigarettes, and alcoholic drinks, for the whole family. At the other, we find the housewife with a weekly allowance calculated only to pay for the family's food and for some very small non-food items, such as soap, matches, and darning materials. Between these extremes the number of possible variations is endless. This would matter comparatively little if a survey were repeated regularly at frequent intervals, always covering exactly the same families, with definite individual patterns of household expenditure. But such an ideal survey is scarcely feasible. Even if by an elaborate system of supervision the continued co-operation of all the families could be secured, the result of the whole survey would still be vitiated by the fact that in individual families not only the numbers of persons are liable to change but, which may be more important, also the numbers of earners, and therefore sometimes the whole pattern of household expenditure.

2. Expenditure on Food

It soon became clear that for our analyses the figures of household expenditure could not, in themselves, be considered reliable measures of comparison. The soundest basis for a comparison of our annual samples with one another would have been provided by data of family income; but only some of the families were prepared to supply these. The largest single group of expenditure that was covered practically in full by all the accounts[1] was the outlay on food, and it was, in fact, mainly these data which we utilized for the purpose of ascertaining the internal consistency of our annual samples as well as for assessing the coherence of the whole series. This was also particularly convenient since during those years of food shortages the study of nutritional intake in relation to food expenditure was obviously our most important problem.

Let us briefly survey some of the relevant data. In Table II food expenditure per head is expressed for the three groups of families in absolute figures and in the form of indices, based on the outlay in 1943—the first year for which figures of family income were also available. We shall make this the base year for all our comparisons. The construction of the chain indices will be explained further below. At the present stage the chain indices referring

Table II

Food Expenditure per Person per Week

	All Families	U Families Average	I Families Average
	d.	d.	d.
1940	84	83	—
1941	90	95	—
1942	103	113	—
1943	120	120	127
1944	129	128	129
1945	131	134	138
1946	139	139	144
1947	142	143	152
1948	149	150	157
1949	157	170	162

Indices of Food Expenditure (1943=100)

	All Families	U Families		I Families	
		Average	Chain	Average	Chain
1940	70	69	69	—	—
1941	75	79	77	—	—
1942	86	94	91	—	—
1943	100	100	100	100	100
1944	108	107	105	102	102
1945	109	112	107	108	108
1946	116	115	113	113	115
1947	118	119	121	119	128
1948	124	125	120	124	137
1949	134	142	129	128	144

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[1] Most of the families stated the outlay on all main meals bought away from home, and we included this in the figures of household expenditure on food.

to the U and the I families are of minor interest; what we are primarily concerned with is the outlay of all the families in the different years and the absolute average outlay of the different groups of families. In 1943 the sub-sample of U families showed the same average outlay as the total sample, although the U sample comprised not much more than one-fifth of all the families. The outlay of the I families—about one-sixth of the total—was six per cent higher. These families, however, contained relatively more earners—just under one-sixth more—than the U families. In 1949 the highest average outlay was that of the U families, which spent 14s. 2d. per head per week; this was about 7½ per cent more than the average expenditure of all the families and about 3½ per cent more than the I families. Here again the figures of expenditure per head show an inverse relation of the numbers per family, of earners[1] to dependents.

It will, however, be seen from the figures in Table IV that this relation by no means always held good. For one thing, individual earning capacities vary, a fact which may easily be reflected in small sub-samples. Moreover, the flexibility of the average housewife's spendable income was probably greater for the I families than for any other groups, a point to which we shall return. In spite of this, the figures of average food expenditure of the main group of families and of the two sub-groups are sufficiently close together to suggest that as regards this item the samples are reasonably consistent.[2] That the nutritional standard of the families was not noticeably affected by differences in the average outlay on food, is suggested by the figures of animal protein intake per head per day, in Table III. We are not concerned here with details of nutrition. However, the foods that are sources of animal protein are, on the whole, the dearest and the most highly prized dietary items, and it seems worth pointing out that in spite of differences in outlay per head the average intake of animal protein was in any year very nearly the same for the group of all families and for the group of U families. No separate analyses were carried out for the I families, but it is highly improbable that had this been done, any striking differences would have emerged.

The index figures of food expenditure of all the families are derived from figures of average outlay of samples of families of which the numbers varied from year to year; hence there is no real connexion between the individual

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[1] Two half-time earners are always counted as one earner.

[2] The fact that differences in the food expenditure per head of the families in the one group and that of any of the other groups imply a proportionate difference in the opposite direction with regard to the expenditure of those families not included in the sub-group which is being considered, does not contradict this. For in whatever way the total samples were broken up, so long as the sub-groups represented a reasonably substantial proportion of the total, the range of average outlay on food remained fairly narrow. Generally, differences became most obvious with differences in family composition, *i.e.*, in the respective proportions of the number of children to adults. *Cet. par.*, the larger this proportion the lower tended to be the outlay per head. But it does cost less to feed a child than to feed an adult, particularly at a time when a child obtained at least as much of the subsidized foods as did an adult. For this reason we considered in our annual surveys mainly the outlay per 'man', which was calculated by means of a scale that gave unit value to the male adult and only fractions of this to the children in the several age groups. For the purpose of this present paper, however, such refinements would have introduced unnecessary complications.

TABLE III

Animal Protein per Person per Day

	All Families	U Families
	gm.	gm.
1942... ...	—[1]	38
1943... ...	37	36
1943... ...	...	35
1944... ...	37	37
1944... ...	...	40
1945... ...	38	39
1945... ...	...	38
1946... ...	38	38
1946... ...	...	38
1947... ...	39	38
1947... ...	...	36
1948... ...	32	32
1948... ...	...	32
1949... ...	33	34

[1] No net value available.

links of the series, which is bound together only by the fact that the annual selection of the families was carried out in such a way as to secure continuity of type.[1] The chain indices of expenditure of the U and the I families, on the other hand, refer to the actual changes in the expenditure of identical families, in two successive years. The data by means of which these chain indices were computed will be found—from 1943 onwards—in Table IV. The indices were obtained in the following way :

For each year except the first of the sequence, we have two groups of U (and of I) families, each consisting of families that have provided accounts in two successive years. Some of the families will appear in both groups—having provided accounts for three successive years—; yet, as a whole, the two groups represent non-identical families. The one of the groups is linked to the preceding and the other to the succeeding year. Let the base year be 0 and the following years 1, 2, 3 . . . n. The indices of standardized expenditure will be I_0, I_1, I_2 . . . I_n. The index of expenditure I_0 in the base year is given the value 100. The index figure for the year 1 is then obtained by multiplying this value by the ratio of the expenditure of the same families in the years 1 and 0. For the next group of families data are available for the years 1 and 2. The change in expenditure from the year 1 to the year 2 can be represented in the same way as for the first group of families; but in order

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[1] All the families contained a main earner who was a manual worker, and, in the year when they contributed to the sample for the first time, at least one dependent child. No families were accepted that catered for boarders.

TABLE IV

Structure of Families, Expenditure on Food, and Income

	I Families						U Families				
	Persons per Family	Earners per Family	Dependent Children per Family	Income per Family p. week[1] (net)	*Expenditure on Food as Percentage of Income minus Cost of Housing*	Expenditure on Food per Person per Week	Persons per Family	Earners per Family	Dependent Children per Family	*Computed* Income p. Fam. p. Week[2] (net)	Expenditure on Food per Person per Week
	No.	No.	No.	s. d.	%	s. d.	No.	No.	No.	s. d.	s. d.
1943 ...	4.6	1.7	2.2	129 7	*42*	10 7	4.8	1.5	2.3	124 3	9 11
1944 ...		1.8	2.0	142 0	*39*	10 9		1.7	2.1	138 9	10 5
1944 ...	4.1	1.5	1.9	125 9	*39*	10 9	4.1	1.3	1.8	125 5	10 11
1945 ...		1.5	1.8	132 3	*39*	11 4		1.4	1.8	127 3	11 1
1945 ...	4.2	1.5	1.7	145 6	*37*	11 7	4.4	1.6	1.9	148 1	11 3
1946 ...		1.5	1.7	155 5	*36*	12 4		1.8	1.7	160 4	11 11
1946 ...	3.9	1.2	1.9	146 1	*34*	11 7	4.6	1.5	2.2	163 10	11 2
1947 ...		1.3	1.8	152 3	*37*	12 11		1.6	2.1	166 5	11 11
1947 ...	4.2	1.2	2.1	159 4	*37*	12 4	4.8	1.7	2.2	174 6	11 11
1948 ...		1.3	2.0	178 3	*34*	13 2		1.8	2.0	185 6	11 10
1948 ...	4.2	1.3	2.0	164 1	*36*	13 0	4.3	1.7	1.6	172 6	13 2
1949 ...		1.4	1.9	171 7	*36*	13 8		2.0	1.3	183 6	14 2

[1] Including Family Allowances: 1947—4/1d., 5/4d.; 1948—5/0d., 5/0d.; 1949—4/4d.
[2] Including Family Allowances: 1947—5/4d., 5/9d.; 1948—4/11d., 2/10d.; 1949—1/8d.

to obtain a continuous series of index figures we multiply the ratio by the index for the year 1 derived from the data of the first group of families. There will be n independent groups of families, and the index $I_{(n-1)}$ obtained for the (n–1)th group will thus be applied as the multiplier to the ratio of the figures of expenditure of the nth group, in the years n and (n-1), in order to obtain the index I_n. In this way the figures of expenditure of identical families in two successive years are linked together as if throughout the whole sequence of surveys the families had been identical.

Chain indices of this kind are obviously highly sensitive and liable to distort any trend. But although they may over- or under-estimate trends over a number of years, they do provide a genuine measure of changes that occurred from one year to another. These changes, however, were not necessarily due to changes in the cost of food but are likely to have been connected to some extent, with changes in the number of earners, or changes in the earnings of the individual members of the family.[1]

3. Household Expenditure, Income and Earnings

The U group generally contained more families whose main earners were skilled workmen than did the group of all families; but war-time and post-war earnings in industrial towns were fairly high for the unskilled and the semi-skilled as well as for the skilled worker. The families that stated their income tended to include fewer persons, and fewer earners, per family than the two other groups. The mother of a large family seemed more often kept in ignorance of the husband's earnings than the mother of a smaller family, and the mother of several subsidiary earners more frequently ignored the amount of their wages than did the mother of only one such earner. The spending power of the average housewife of the group of all families was somewhat lower than that of the housewife of the two sub-groups, but it seemed unlikely that, on the average, the ' spendable ' income per head—the income that could be disbursed after the deduction of taxes, compulsory insurances, and payment for housing—differed much for the different groups of families.[2]

The figures in Table IV suggest that the outlay on food was linked up fairly closely with the amount of ' spendable ' income as defined. Until 1946 the proportion of this income devoted to the purchase of food shows a declining trend, but in 1947 the figures for the two successive groups of I families suggest a reversal of this movement. This seems fully in keeping with the food supply situation in that year, which saw the most comprehensive rationing this country had ever experienced. One would have expected families with reasonably good incomes to spend proportionately rather more on supplementary foods than on non-food items at a time when the diet in general was severely restricted, while the range of available unrationed foods comprised mainly rather expensive fancy foods.[1]

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[1] A boy, for instance, who had finished his apprenticeship would experience a fairly steep rise in his earnings, and would probably surrender a larger weekly sum to his mother. This would enable her to spend a little more on dietary luxuries or semi-luxuries. There is, of course, an ' inflationary ' element of some such kind to be expected in all the pairs of figures relating to the U and the I families, from the first to the second year. Whether it actually entered into the figures depended largely on the kind of employment in which the subsidiary earners were engaged.

[2] No precise figures of the numbers of earners of all the families could be obtained, since some of the families did not distinguish clearly between part-time and full time employment, while some others refused precise information about the number of hours worked in part-time employment, particularly by the housewife.

We have assumed that the proportion of ' spendable ' income used for the purchase of food by the I families was identical with that used by the U families, and on this assumption have computed the average net income of the U families, *i.e.*, the income obtained from earnings after the deduction of direct taxes and compulsory insurances, and from family allowances. The figures thus obtained are shown in the penultimate column of Table IV. The procedure is carried a step further in Table V, where not only we give the average net earnings per full-time earner of the I families but also the corresponding earnings—derived from the computed figures in Table IV—of the U families. These figures of net earnings are set side by side with the Ministry of Labour figures of average gross industrial earnings, of male earners over 21 years of age and of all earners, male and female, juvenile and adult. No direct comparison is possible between the figures obtained by

TABLE V

Weekly Earnings

	Ministry of Labour Average Earnings (gross)[1]		I Families		U Families	
	Male Workers 21+	All Workers	Earners per Family	Earnings per Full-time Earner (net)	Earners per Family	Earnings per Full-time Earner (net, *computed*)
	s. d.	s. d.	No.	s. d.	No.	s. d.
1943	121 3	93 7	1.7	76 3	1.5	82 10
1944	...	...	1.8	78 11	1.7	81 7
1944	124 4	96 8	1.5	83 10	1.3	96 6
1945	...	...	1.5	88 2	1.4	90 11
1945	121 4	96 1	1.5	97 0	1.6	92 6
1946	...	...	1.5	103 7	1.8	89 1
1946	120 9	101 0	1.2	121 9	1.5	109 3
1947	...	...	1.3	114 0	1.6	100 8
1947	128 1	108 2	1.2	128 4	1.7	99 3
1948	...	...	1.3	133 3	1.8	100 4
1948	137 11	117 4	1.3	122 4	1.7	99 10
1949	142 8	121 9	1.4	119 5	2.0	90 11

[1] From 1943 to 1945, the figures refer to the earnings in July, and from 1946 to 1949, to the earnings in October. Two part-time workers are counted as one full-time worker. (Ministry of Labour *Gazette*, September 1950).

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[1] Potatoes, though scarce, were not yet rationed when our survey was made in 1947. However, not only bread, flour, and flour confectionery, were rationed, but the system of ' point ' rationing had been extended to cover almost every other cereal food, besides the semi-luxuries, such as tinned meat and fish, jams, and tinned milk.

us for the U and the I families, and the Ministry of Labour figures. For not only do our figures refer to average earnings after deduction of compulsory insurances and P.A.Y.E. while the Ministry of Labour figures include both taxes and insurances; but while the weighting of the earnings of the different age and sex groups—*i.e.*, the weighting by the numbers employed—for the Ministry of Labour index is subject to only very gradual changes, our indices are based on averages obtained from families which, in different years, had widely different numbers of subsidiary earners per family. Clearly, the larger the number of juvenile workers and of women doing mainly unskilled work, the lower one would expect the earnings per full-time earner to be. Changes in the number of earners even affect the figures of average earnings obtained from identical families in successive years ; for if children who in the one year were still at school have become earners in the next year, the figure of family income will go up but that of average earnings will go down. On the other hand, those of the juveniles who already were earners in the preceding year might, with increased proficiency, have drawn considerably increased earnings, which would affect the figure of average earnings favourably, independent of any general rise in earnings. Steep increases in the earnings of juveniles were most frequent in the age group up to 18 years; hence whether or not such increases occurred in any particular year in sufficient number to make any noticeable impact upon the index figures, might depend on the age structure of the families. If all this is borne in mind the discrepancies between the different sets of figures in Table V will appear less striking.

4. EXPENDITURE PATTERNS OF THE INSTITUTE SURVEYS AND OF THE MINISTRY OF LABOUR SURVEY

The figures in Table VI refer to the I families only. They show the distribution of the housekeeping money and of the total income on the

TABLE VI
Expenditure of I Families

	Household Expenditure Only (Total=100)				Outlay of Net Income (Total=100)			
	Food	Housing	Fuel & Lighting	Other	Food	Housing	Fuel & Lighting	Other
	%	%	%	%	%	%	%	%
1943	48	13	7	32	38	10	6	46
1944	45	12	7	36	35	9	5	51
1944	44	13	8	35	35	10	6	49
1945	45	13	7	35	36	10	5	49
1945	45	13	7	35	33	10	5	52
1946	45	12	7	36	33	9	5	53
1946	44	13	8	35	31	9	6	54
1947	43	13	7	37	33	10	5	52
1947	39	13	7	41	33	11	6	50
1948	40	12	7	41	31	9	5	55
1948	44	10	7	39	33	8	5	54
1949	45	10	8	37	33	8	6	53

expenditure groups: food, housing, fuel and lighting, and other items. It is interesting to note that the proportion of the household expenditure devoted to the purchase of food in 1947 does not show the sudden rise which we found in the figures in Table IV, but, indeed, a decline from 1946. This was due to the considerable increase in the sums declared as 'housekeeping' money in 1947. As we have already pointed out, housekeeping money is not necessarily a constant proportion of the family income, least of all when the housewife knows exactly to how much this income amounts and if she shares in full the responsibility for its allotment. 1947 was, in fact, a year of much household repair and replacement. But even if we take the amounts spent on food as a proportion of the total family income, the figures obtained are less suggestive than those in Table IV. The explanation for this is found in the high average outlay on housing by the I families in 1947. One or two of these families were paying uncontrolled rent, while a few other families had started to buy their houses and were paying fairly high instalments.[1]

TABLE VII

Household Expenditure of All Families (Total=100)

	Food	Housing	Fuel & lighting	Other
	%	%	%	%
1940 ...	44	14	9	33
1941 ...	47	15	9	29
1942 ...	49	14	9	28
1943 ...	50	13	8	29
1944 ...	48	12	8	32
1945 ...	47	12	7	34
1946 ...	50	11	7	32
1947 ...	50	10	7	33
1948 ...	45	10	7	38
1949 ...	47	11	7	35

Table VII gives the patterns of household expenditure of all the families of our samples. It is more regular than one might have expected. Particularly noticeable is the steady trend of the relative outlay on housing as well as on fuel and lighting. This would suggests that the annual samples were consistent with one another.

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[1] In order to avoid introducing a fourth group of families we have not shown any separate figures for all the families that stated their income. It may, however, be of interest to have the most relevant data. They are set out in this Table:

	No. of Families	Persons per family	Food expenditure per person per week	Food expenditure as percentage of total net income
				%
1943	97	4.7	10s. 3d.	40
1944	114	4.3	11s. 1d.	35½
1945	99	4.3	11s. 4d.	35½
1946	75	4.7	11s. 5d.	36
1947	67	4.5	12s. 1d.	35
1948	41	4.1	12s. 11d.	32
1949	41	4.1	13s. 8d.	31

The gradual decline in the relative cost of housing is also apparent in Table VIII, which sets out the expenditure patterns derived from the Ministry of Labour survey in 1938–39, modified by the changes in the price indices for the several groups. The price indices used for this purpose until 1947 are those worked out by Professor Allen and D. Seers,[1] while from 1947 onward they are the indices published in the Ministry of Labour *Gazette*. It is remarkable that the proportions in Table VIII should come so near to the proportions of the corresponding groups in Table VI, of the outlay of net income, in spite of the fundamental differences in the two surveys, pointed out earlier in this paper. The outlay on fuel and lighting registered by the families of our samples, was bound to be somewhat lower than would have been figures of average outlay based on annual consumption ; for the surveys were taken in the summer and in the autumn, and although many of the families were regularly laying in stocks of coal, their gas and electricity bills were below those paid during the winter months.

TABLE VIII

Ministry of Labour Weighting of Retail Price Index

	Food	Rent[1]	Fuel and Lighting	All Other Items
	%	%	%	%
1940	39	11	7	43
1941	38	10	7	45
1942	36	9½	7	47½
1943	35	9	7	49
1944	34½	9	7	49½
1945	34½	9	7	49½
1946	34½	9	7	49½
1947	34½	8½	7	50
1948	34	8	7	51
1949	35¼	7¾	7	50

[1] Including rates.

5. CONCLUSION

What conclusions can we draw from this summary ? First, it would appear that small non-randomized samples of family expenditure can be taken in such a way as to assure a fair degree of continuity in their structure. For this it is necessary to define fairly strictly the type of family to be covered by the samples. A genuine continuous nucleus—our U and I families—can provide some measure of internal consistency in successive samples. The most careful possible checking must be applied to the accounts of the individual families at all stages. By this means it was possible to obtain useful figures of working-class consumption, and to obtain them quickly, during years when no large-scale survey could be undertaken. The limitations became soon obvious: the picture had to omit the expenditure on much that was bought at irregular intervals or out of the earners' pockey money. Attempts to obtain data of all the earners' expenditure either failed completely or produced results that were manifestly untrue. Inquiries about the outlay on clothing during the whole year, too, gave only highly unreliable figures. Working-class families rarely keep an account of their expenditure, and cross-questioning usually revealed that the ' purchases ' of apparel stated by the housewife were not what the family had actually bought in the course of the year, but what the housewife thought would be needed.[1]

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[1] R. G. D. Allen, *Prices*, London and Cambridge Economic Service. BULLETIN 1, Vol. XXVII. Dudley Seers, *The Increase in the Working-Class Cost of Living*. Institute of Statistics, BULLETIN, Vol. 10, No. 5.

The necessary degree of precision to make the small inquiry worth while can be secured only through the care of those responsible for the survey, and not by means of an elaborate system of book-keeping imposed upon the housewives. We discovered that a simple cash book in the hands of the housewife produced the most trustworthy results.

The data obtained from such surveys cannot be correct to the last detail. Yet they have enabled us to present annually an outline of food consumption, and of outlay on food in relation to other items, which it has, probably, provided a serviceable indication of the expenditure patterns, not only of the families that took part in the surveys, but of families of a similar type in general.

T. SCHULZ.

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[1] The outlay on clothing by the housewives during the period of the survey averaged in all the years between 8 and 9 per cent of the housekeeping money. Some other figures of outlay may be of interest in this context : Between 95 and 100 per cent of the housewives had taken out voluntary insurances, the weekly amounts paid fluctuating slightly around 5s. (per family thus insured), from 1943 to 1949. During the same years, between two-thirds and three-quarters of the housewives paid for some of their families' amusements, approximately 3s. per week in 1943 and 1944, and about 5s. in the later years. Between 95 and 100 per cent bought newspapers out of the housekeeping money ; the outlay on these, per family buying, rose steadily from 1943 to 1949, from 1s. 3d. to 2s. 2d. per week. (In the years before 1943 the expenditure on these items was not separately tabulated.)

LIQUID ASSET HOLDINGS IN OXFORD

This paper is the third in the series devoted to the results of the pilot survey of incomes and savings in Oxford.[1] In this paper we shall analyse the liquid asset holdings of spending units of various types and the changes in their holdings during the previous year; we shall also consider how spending units' total liquid assets are composed and the degree of concentration of ownership.

Liquid assets are defined as those assets that can be converted into cash, either on demand or at short notice, at their face value. In other words, they are financial assets that are not subject to the risk of loss of value in money terms; nor, of course, can they be expected to appreciate in capital value. In practice our inquiry was limited to assets of the following types :

(1) Post Office Savings Bank deposits
(2) Trustee Savings Bank deposits
(3) Savings Certificates (at purchase price)
(4) Defence Bonds
(5) Other savings bank deposits
(6) Co-operative Society shares and deposits
(7) Building Society shares and deposits
(8) Commercial bank deposits

No attempt was made to ask about holdings of bank notes or coin.

The economic unit to which all the data refer is the ' spending unit '. This is defined as follows : every person of 18 years of age or over is a separate spending unit, except that a wife forms part of her husband's spending unit; children under 18 are included in the spending unit of their parents. For practical purposes the spending unit is almost identical with the Inland Revenue's income unit. About 40 per cent of the spending units interviewed were single persons. Spending units are classified by various characteristics : sometimes the characteristic is an aggregate derived from all the members of the unit, *e.g.*, their total income for the past year; in other cases it is a characteristic of the head of the spending unit only. The head of a single person spending unit is, of course, that person; in spending units that contain a husband and wife, the husband is always regarded as the head.

AMOUNTS OF LIQUID ASSETS HELD

Total Liquid Assets

Table I gives some information about total liquid asset holdings. 78 per cent of Oxford spending units have some liquid assets and their average holding is £409 per spending unit; this represents an average holding by all spending units of £321 per spending unit. The standard deviation of this last figure is £657, giving a coefficient of variation of over 2. This is large but it is typical of the frequency distributions of asset ownership, all of which are very skew. As a result, the standard errors of the estimates of mean liquid asset holdings are also quite large, and in general only very marked differences, in a sample of this size, can be regarded as significant.

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[1] For previous papers see BULLETIN, Vol. 13, No. 9 and Nos. 11 and 12.

TABLE I

Total liquid asset holdings, by spending units of various types

Characteristic of spending unit	*Percent having liquid assets*	*Those with assets: Mean*	*Whole Group*		*Sample size*
			Mean	*Standard deviation*	
	%	£	£	£	No.
All spending units	78	409	321	657	416
Total income of spending unit:					
Under £200	63	319	201	499	69
£200 to £399	76	227	173	365	149
£400 to £599	85	324	277	648	105
£600 to £999	85	376	318	477	46
£1000 and over	85	1641	1398	1973	47
Occupation of head :					
All manual workers	*79*	*170*	*133*	*270*	*174*
Skilled workers	86	266	230	328	58
Semi-skilled (machine) ...	82	98	80	117	34
Semi-skilled (other) ...	71	123	88	199	52
Unskilled	72	118	84	170	30
All salaried and self-employed	*84*	*551*	*461*	*1020*	*166*
Clerical, shop assistants, etc.	76	235	180	284	46
Managerial, professional and technical employees ...	95	636	607	1209	85
Self-employed	70	896	624	1246	35
Retired, unoccupied and unemployed	*68*	*847*	*574*	*1311*	*76*
Age of head :					
18 to 29	72	221	159	351	81
30 to 39	82	217	178	343	83
40 to 49	84	305	255	704	79
50 to 59	77	519	401	1041	68
60 to 69	81	660	533	1302	61
70 and over	71	578	408	976	44

Only 63 per cent of spending units whose total incomes are less than £200 have liquid asset holdings. In the next income group (£200 to £399) 76 per cent hold liquid assets and in all higher income groups the figure is 85 per cent. Mean holdings of the four lowest groups do not vary significantly, but the holdings of the top income group (£1,000 and over) are very large indeed; at £1,400 per spending unit they are more than four times the general average.

Analysis by occupation of head shows that the salaried and self-employed hold on the average three times as much in liquid assets as manual workers; the retired and unoccupied hold even more. Within the manual worker group the skilled workers hold considerably more than the semi-skilled or unskilled workers; these latter have only £80 to £90 each on the average. Within the salaried and self-employed group the clerical workers and shop assistants hold much less than the managerial, professional and technical employees and the self-employed; the last two categories hold over £600 each on the average.

Analysis by age of head suggests that liquid asset holdings generally increase with the age of the head up to the age group 60 to 69; in the final age group (70 and over) they decline again.

Post Office Savings Bank Deposits

We turn now to the consideration of holdings of each type of asset separately. Table II gives details of deposits in the Post Office Savings Bank. Here we find in many instances similar patterns to those exhibited by total liquid assets. As income rises the percentage of spending units who have deposits in the Post Office rises also; the percentage is at a minimum in the £200 to £399 income group and at a maximum amongst spending units with incomes of £1,000 and over. The average amount of deposits per spending unit does not vary much in the four lowest groups but jumps suddenly to £202 per spending unit in the top group. These facts indicate that the Post Office is well patronised by the upper income-groups.

TABLE II

Deposits in the Post Office Savings Bank, by spending units of various types

Characteristic of spending unit	*Percent having deposits*	*Those with deposits: Mean*	*Whole Group*		*Sample size*
			Mean	*Standard deviation*	
	%	£	£	£	No.
All spending units	47	125	59	170	416
Total income of spending unit:					
Under £200	43	130	56	126	69
£200 to £399	40	131	52	155	149
£400 to £599	54	89	48	132	105
£600 to £999	48	144	70	127	46
£1,000 and over	59	342	202	388	47
Occupation of head :					
All manual workers	*44*	*102*	*45*	*60*	*174*
Skilled workers	52	134	70	162	58
Semi-skilled (machine) ...	51	60	31	47	34
Semi-skilled (other) ...	35	101	36	79	52
Unskilled	34	75	25	75	30
All salaried and self-employed	*52*	*126*	*66*	*85*	*166*
Clerical, shop assistants, etc.	41	73	30	44	46
Managerial, professional and technical employees ...	69	157	108	255	85
Self-employed	34	80	27	66	35
Retired, unoccupied and unemployed	*46*	*258*	*118*	*259*	*76*
Age of head :					
18 to 29	45	84	38	74	81
30 to 39	45	93	41	100	83
40 to 49	48	91	44	111	79
50 to 59	52	135	71	177	68
60 to 69	36	301	109	284	61
70 and over	58	193	111	237	44

Analysis by occupation shows that manual workers hold in the Post Office on the average only slightly less than the salaried and self-employed; highest average holdings are those of the retired and unoccupied. Within the salaried and self-employed group there is a marked disparity between the managerial and professional employees on the one hand, who have over £100 on the average, and the clerical workers with only £30 and the self-employed with only £27.

Analysis by age shows a rising trend of deposits as the age of the head rises, continuing into the last class.

Trustee Savings Bank Deposits

Table III shows the analysis of spending units according to their deposits in the Trustee Savings Bank. On the average 20 per cent of spending units have deposits in the bank but the highest concentration is in the middle income group—£400 to £599—where 32 per cent of spending units have deposits. In higher income groups the percentage falls to 13 per cent. This pattern is strikingly different from that exhibited by the Post Office; and we shall find a number of other differences between the two. They can doubtless be explained by differences in the historical development of the two banks. Although amongst the higher income groups the proportion of spending units who have deposits in the Trustee Savings Bank is low, those that do keep deposits in the bank keep a good deal more than lower income depositors.

TABLE III

Deposits in Trustee Savings Bank, by spending units of various types

Characteristic of spending unit	*Percent having deposits*	*Those with deposits: Mean*	*Whole Group*		*Sample size*
			Mean	*Standard deviation*	
	%	£	£	£	No.
All spending units	20	152	30	111[1]	416
Total income of spending unit:					
Under £200	14	131	18	74	69
£200 to £399	16	110	18	62	149
£400 to £599	32	142	45	112	105
£600 to £999	13	466	59	314	46
£1000 and over	13	242	32	115	47
Occupation of head :					
All manual workers	*22*	*104*	*23*	*78*	*174*
Skilled workers	32	141	45	103	58
Semi-skilled (machine)	17	130	22	92	34
Semi-skilled (other) ...	13	57	7	36	52
Unskilled	24	33	8	18	30
All salaried and self-employed	*22*	*162*	*35*	*153*	*166*
Clerical, shop assistants, etc.	25	92	23	60	46
Managerial, professional and technical employees ...	15	233	34	191	85
Self-employed	34	176	60	144	35
Retired, unoccupied and unemployed	*8*	*332*	*27*	*117*	*76*
Age of head:					
18 to 29	15	54	8	40	81
30 to 39	28	81	23	80	83
40 to 49	29	138	41	107	79
50 to 59	18	208	38	185	68
60 to 69	11	162	17	71	61
70 and over	8	465	38	138	44

[1] Amended from previous estimate.

The analysis by occupation shows no very marked differences between the mean holdings of deposits of the three broad occupational groups. But within the manual workers' group the skilled workers (and to some extent the semi-skilled workers in the machine occupations) have considerably more deposits than the others. In the salaried and self-employed group the highest proportion of depositors is amongst the self-employed; and the average deposits of this group are well above the rest.

The analysis by age shows once more a different situation from that found in the Post Office. The maximum proportion of depositors is reached in the ages 30 to 49; after that the proportion falls away quite rapidly. This can no doubt be explained by the fairly recent growth of the Trustee Savings Bank movement in Oxford, as elsewhere in the South. Average deposits per spending unit also follow the same pattern except that the very high average deposits of the few depositors in the final age group push up average deposits per spending unit of this group to a fairly high figure.

From these few indicators it seems that the 'typical' depositor in the Trustee Savings Bank is of lower-middle age and of upper-medium income.

Savings Certificates

Table IV gives information about the holdings of Savings Certificates. It is noteworthy that the proportion of spending units holding Certificates rises with income, especially in the top income group; in this group two-

TABLE IV

Holdings of Savings Certificates, by spending units of various types

Characteristic of spending unit	*Percent having Savings Certificates*	*Those with Certificates: Mean*	*Whole group*		*Sample size*
			Mean	*Standard deviation*	
	%	£	£	£	No.
All spending units	30	227	67	183	416
Total income of spending unit:					
Under £200	17	287	48	140	69
£200 to £399	30	140	42	107	149
£400 to £599	29	173	50	147	105
£600 to £999	32	203	65	145	46
£1,000 and over	66	476	312	482	47
Occupation of head :					
All manual workers	*23*	*119*	*27*	*83*	*174*
Skilled workers	28	142	40	95	58
Semi-skilled (machine) ...	17	76	13	37	34
Semi-skilled (other) ...	16	181	29	113	52
Unskilled	29	55	16	28	30
All salaried and self-employed	*43*	*241*	*104*	*239*	*166*
Clerical, shop assistants, etc.	33	153	51	122	46
Managerial, professional and technical employees ...	53	282	151	311	85
Self-employed	38	221	83	150	35
Retired, unoccupied and unemployed	*29*	*433*	*124*	*319*	*76*
Age of head :					
18 to 29	23	160	37	110	81
30 to 39	23	179	42	112	83
40 to 49	36	230	83	213	79
50 to 59	40	231	93	245	68
60 to 69	40	304	123	331	61
70 and over	17	250	44	113	44

Note.—The Certificates were valued at their purchase price. This, of course, would be less than their current surrender value ; the difference would depend on the age of each Certificate and, to some extent, on the issue to which it belonged.

thirds of spending units have Certificates, compared with 30 per cent in the population as a whole. In the lowest income group only 17 per cent hold Certificates but those who have them tend to have large amounts so that the average holding per spending unit in this group (£48) is not significantly different from the average in the next two income groups; the big jump in the average is, once more, in the top income group. It is evident that Savings Certificates are considered a good form of investment by spending units in the higher income ranges.

The analysis by occupation shows that manual workers hold only £27 per spending unit on the average while the salaried and self-employed hold over £100 and the retired and unoccupied £123. Highest average holding is amongst the managerial, professional and technical employees; but this is partly due to the large percentage who hold Certificates in this group (53 per cent). While only 29 per cent of the retired and unoccupied hold Certificates, those that hold them have very large amounts (average—£433).

The analysis by age shows a steadily rising trend in the proportion holding Certificates until the age of 50; from then until 69 the proportion remains at 40 per cent and thereafter it falls rapidly to 17 per cent. Average holding per spending unit reaches a peak (£123) in the 60 to 69 age group and declines sharply in the final group.

Defence Bonds, Building Society and Co-operative Society Shares and Deposits

For these three sorts of assets we give only the percentage of spending units of each type who own them (Table V). The means and standard deviations for Defence Bonds and Building Society shares and deposits are not very reliable because of the small proportion of spending units who own these kinds of asset; average asset holdings in Co-operative Societies on the other hand are small and therefore not of great importance in this connection. The analysis of ' other ' savings bank deposits has been omitted because the group is not homogeneous and very few spending units have them.

Defence Bonds are held by only 7 per cent of all Oxford spending units; but they are much more popular in the top income group, where 20 per cent of spending units have them. They are infrequently held by manual workers (only 2 per cent) but more often by managerial, professional and technical employees (15 per cent) and by the retired and unoccupied (16 per cent). Of the age-groups, only those of 60 and over have a marked tendency to hold this asset.

The proportion of spending units holding Building Society assets has a very marked income-gradient; it rises from 1 per cent in the lowest group to 15 per cent in the top income group. Manual workers rarely invest in this way; the managers and the self-employed most frequently do so. The age analysis shows no tendency for the older age groups to be attracted to this form of investment.

Twenty four per cent of all Oxford spending units reported investments in a Co-operative Society. Presumably, in almost all cases this was the local

TABLE V

Percent of spending units holding Defence Bonds, Building Society shares or deposits and shares or deposits in a Co-operative Society, by type of spending unit

Characteristic of spending unit	*Percent of Spending Units of each type with :*			*Number in sample*
	Defence Bonds	*Building Society shares or deposits*	*Shares or deposits in a Co-operative Society*	
All spending units	7	5	24	416
Total income of spending unit :				
Under £200	4	1	12	69
£200 to £399	7	3	26	149
£400 to £599	8	6	33	105
£600 to £999	5	10	21	46
£1,000 and over	20	15	11	47
Occupation of head :				
All manual workers	*2*	*2*	*32*	*174*
All salaried and self-employed	*11*	*11*	*17*	*166*
Clerical, shop assistants, etc.	9	7	20	46
Managerial, professional and technical employees	15	11	17	85
Self-employed	5	20	14	35
Retired, unoccupied and unemployed ...	*16*	*3*	*12*	*76*
Age of head :				
18 to 29	5	5	5	81
30 to 39	5	5	34	83
40 to 49	4	6	35	79
50 to 59	5	7	36	68
60 to 69	15	4	17	61
70 and over	11	2	10	44

Society. The greatest proportion is in the income-group £400 to £599, which may be regarded as consisting mainly of better off manual and clerical workers. High income and low income spending units are not often members. Analysis by occupation shows 32 per cent of manual workers with assets in the Co-op, 17 per cent of the salaried and self-employed and 12 per cent of the retired and unoccupied. Analysis by age shows that Co-op members are predominantly from the middle age groups (30 to 59); only 5 per cent of the spending units whose heads are under 30 reported assets of this type.

Commercial Bank Deposits

Lastly, we have Commercial Bank Deposits (Table VI). There is a marked tendency for the proportion of spending units with bank accounts to increase as income increases; only 14 per cent of the lowest income group have accounts, compared with 79 per cent in the top income group. The average value of deposits held per spending unit does not change so consistently : the low income spending units with bank accounts have on the average very large accounts and this gives the whole of this group a high mean holding (£103). In the next income group the mean holding is only £30; thereafter it rises steadily until, in the top income group, the mean holding becomes very large (£524).

TABLE VI

Deposits in Commercial Banks, by spending units of various types

Characteristic of spending unit	*Percent having deposits*	*Those with deposits: Mean*	*Whole Group*		*Number in sample*
			Mean	*Standard deviation*	
	%	£	£	£	No.
All spending units	26	336	87	299	416
Total income of spending unit :					
Under £200	14	734	103	422	69
£200 to £399	17	177	30	136	149
£400 to £599	26	216	55	182	105
£600 to £999	42	186	79	162	46
£1,000 and over	79	666	524	1096	47
Occupation of head :					
All manual workers	*7*	*165*	*12*	*65*	*174*
All salaried and self-employed	*51*	*378*	*194*	*687*	*166*
Clerical, shop assistants, etc.	29	196	58	217	46
Managerial, professional and technical employees ...	66	299	196	513	85
Self-employed	57	791	452	1107	35
Retired, unoccupied and unemployed	*39*	*345*	*134*	*315*	*76*
Age of head :					
18 to 29	24	219	52	161	81
30 to 39	26	230	59	238	83
40 to 49	27	370	99	576	79
50 to 59	22	631	139	528	68
60 to 69	33	283	92	279	61
70 and over...	27	472	126	295	44

Analysis by occupations shows only 7 per cent of manual workers with bank accounts compared with 51 per cent of the salaried and self-employed and 39 per cent of the retired and unoccupied. Average holdings per spending unit are lowest amongst manual workers (£12) and highest amongst the self-employed (£452).

The analysis by age shows no definite tendency for the proportion who have bank accounts to vary with the age of head; but the average amount in the bank is larger from the age of 40 onwards.

Liquid assets discounted by income

The total liquid asset holding of each spending unit was divided by its total income. This is a crude way of discounting for the influence of income size on asset holding and so focussing attention on other influences. The results of the operation are presented in Table VII. They seem to suggest that skilled workers have greater holdings of liquid assets in relation to their incomes than other manual workers; clerical workers are about average, and the managers, self-employed and retired are a good deal above average. The managers rarely have less than 5 per cent of liquid assets in relation to their incomes; the retired and unoccupied quite frequently have liquid assets that are greater than their annual incomes. This is due as much to their incomes being low as to their assets being high.

The analysis by age indicates that the liquid asset—income ratio grows with age, at any rate after the age of 40. The analysis by sex shows that

Table VII

Total liquid asset holdings as a percent of income, of spending units of various types
(per cent of spending units of each type)

Characteristic of spending unit	*Liquid asset holding as per cent of income*					
	Under 5%	5% *to* 24.9%	25% *to* 99.9%	100% *& over*	*Not ascertained*	*All*
All spending units	38	19	22	17	4	100
Occupation of head of spending unit :						
Skilled worker	32	20	33	13	1	100
Semi-skilled (machine) ...	50	26	13	4	7	100
Semi-skilled (other)	59	19	9	10	3	100
Unskilled	53	22	14	7	4	100
Clerical, shop assistants, etc.	39	18	23	16	5	100
Managers, professional and technical employees ...	12	31	30	21	5	100
Self-employed	30	13	32	20	5	100
Retired, unoccupied and unemployed	34	2	21	38	4	100
Age of head of spending unit :						
18 to 29	42	31	16	10	1	100
30 to 39	46	20	22	7	5	100
40 to 49	34	15	34	14	3	100
50 to 59	38	18	16	23	6	100
60 to 69	32	11	24	25	8	100
70 and over	34	13	17	35	1	100
Sex of head of spending unit :						
Male	41	21	21	13	4	100
Female	32	13	24	27	4	100

female heads usually have more liquid assets in relation to their incomes than male heads. This again is due very largely to the relative lowness of female incomes.

We shall refer to the liquid asset—income ratio again in the paper that deals with factors influencing saving habits.

Ownership of stocks and shares

Although stocks and shares are not liquid assets by our definition it is convenient to give the analysis of their ownership at this point. From Table VIII it will be seen that the percentage of spending units owning stocks and shares in the bottom four income groups is not very variable; but in the top income group (£1,000 and over) more than 60 per cent are stock or shareholders and nearly 40 per cent have £2,000 worth or more.

The proportion of manual workers owning stocks and shares is negligible; and clerical workers own them rather seldom. 25 per cent of managers, on the other hand, are stock or shareholders and 30 per cent of the retired and unoccupied. The largest proportion of owners of £2,000 and over (16 per cent) is in this last group.

The analysis by age indicates that the percentage of spending units owning stocks and shares rises as the age of the head rises : amongst those aged 60 and over 20 per cent are owners, of whom half own £2,000 and over.

TABLE VIII

Ownership of stocks and shares, by spending units of various types
(per cent of spending units of each type)

Characteristic of spending unit	*Value of stocks and shares*			*All spending units*	
	Nil	*Under £2,000*	*£2,000 and over*	*Percent*	*No. in sample*
All spending units	89	7	4	100	416
Total income of spending unit :					
Under £200	92	8	1	100	69
£200 to £399	94	5	1	100	149
£400 to £599	93	4	3	100	105
£600 to £999	89	6	5	100	46
£1,000 and over	38	23	39	100	47
Occupation of head :					
All manual workers	*99*	*1*	—	*100*	*164*
All salaried and self-employed	*83*	*12*	*5*	*100*	*166*
Clerical, shop assistants, etc.	93	4	3	100	46
Managerial, professional and technical employees	75	18	7	100	85
Self-employed	84	12	4	100	35
Retired, unoccupied and unemployed ...	*70*	*14*	*16*	*100*	*76*
Age of head :					
18 to 29	92	6	2	100	81
30 to 39	96	4	—	100	83
40 to 49	94	2	4	100	79
50 to 59	89	8	3	100	68
60 to 69	79	11	10	100	61
70 and over	80	11	9	100	44

Note.—This table is based on replies to the following questions : (1) ‘ Do you own any stocks or shares ? ” If yes, (2) ‘ Can you tell me approximately how much you have got in stock and shares, at their present value ? ’ The person interviewed was asked to indicate in which of five broad ranges of value his holdings lay. Since the top group was open-ended (‘ over £10,000 ’) it is impossible to estimate the average value of stocks and shares held.

THE COMPOSITION AND CONCENTRATION OF LIQUID ASSET HOLDINGS

Composition

It is of some interest to consider how spending units of different types allocate their liquid capital amongst the various sorts of liquid assets available. For the purposes of this analysis we have confined our attention to the six main sorts of liquid assets, omitting ‘ other ’ saving banks and Co-operative Society shares and deposits. The six main sorts are the four in the National Savings group and Building Society shares and deposits and Commercial bank deposits. For each type of spending unit we have aggregated the mean holdings of each of these six sort of assets and expressed each mean holding as a percentage of the aggregate. The results are shown in Table IX.

The largest element in liquid assets is deposits in the Commercial Banks, amounting to nearly 30 per cent of the total; next in importance is Savings Certificates (22 per cent of the total), closely followed by the Post Office Savings Bank (nearly 20 per cent). The other three sorts of asset each account for about 10 per cent of the total. The National Savings Group as a whole represents about 63 per cent of liquid assets held.

TABLE IX

Composition of total liquid asset holdings, of spending units of various types.
(asset holdings of each sort as per cent of total liquid asset holdings)

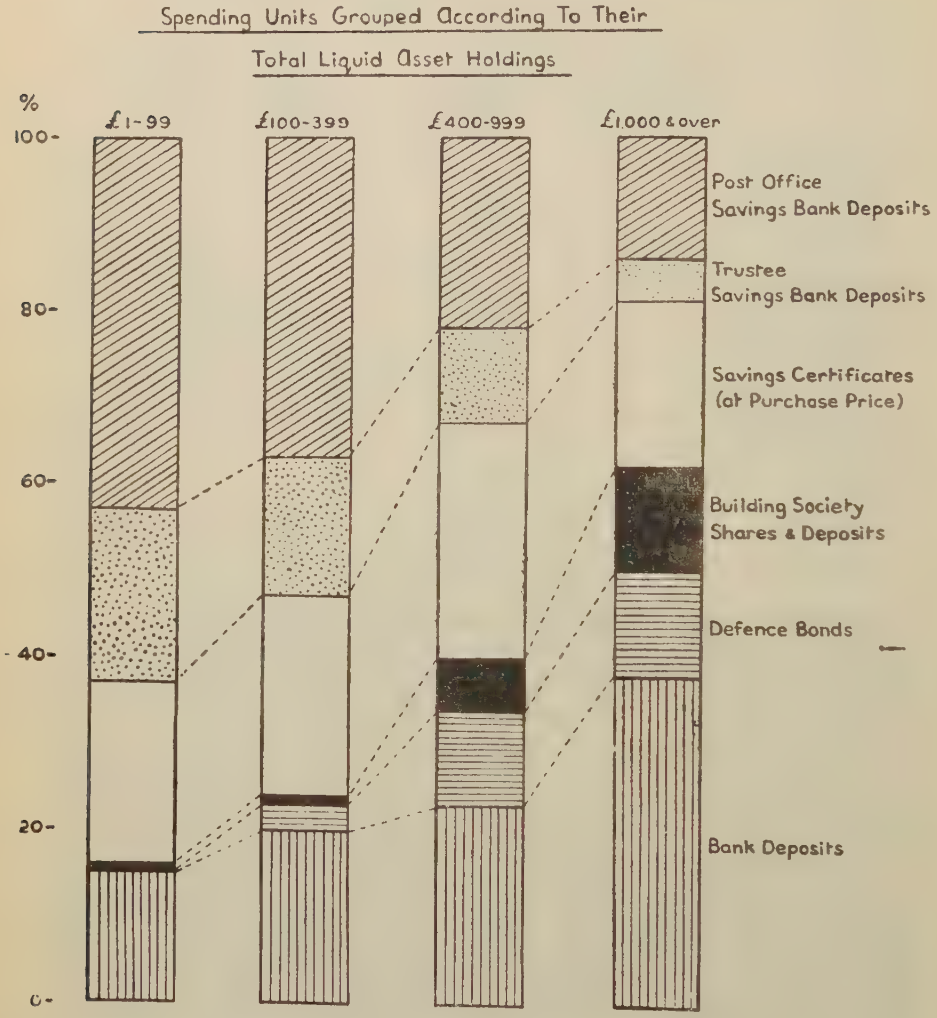
Characteristic of spending unit	*Post Office Savings Bank deposits*	*Trustee Savings Bank deposits*	*Savings Certificates (at purchase price)*	*Defence Bonds*	*Building Society shares and deposits*	*Commercial Bank deposits*	*Combined Total*
All spending units ...	19	10	22	12	9	28	100
Total income of spending unit : ...							
Under £200 ...	24	8	20	5	—	43	100
£200 to £399 ...	28	10	23	22	2	16	100
£400 to £599 ...	19	18	20	11	10	22	100
£600 to £999 ...	22	18	20	13	3	24	100
£1,000 and over ...	14	2	22	8	18	36	100
Occupation of head :							
Manual workers ...	36	19	22	8	6	10	100
Salaried and self-employed ...	13	7	21	10	10	39	100
Retired, unoccupied and unemployed	21	5	22	16	13	24	100
Total liquid asset holding of spending unit :							
£1 to £99 ...	43	20	21	—	1	15	100
£100 to £399 ...	37	16	22	3	1	20	100
£400 to £999 ...	22	11	27	11	6	23	100
£1,000 and over ...	14	5	19	12	12	38	100

Analysis by income shows that Post Office Savings represent about a quarter of the liquid assets of the spending units whose incomes are less than £400, about a fifth of the liquid assets of those with incomes between £400 and £1,000, and only a seventh of the liquid assets of those with income of £1,000 and over. In the case of the Trustee Savings Bank, however, the relationship is different : the proportion that Trustee Savings Bank deposits represent of total liquid assets rises with income up to an income level of somewhere between £600 and £999; after that it drops very suddenly.

Savings Certificates appear to be equally popular in all income groups, in the sense that on the average about a fifth of all liquid assets are held in this form at all levels of income. Defence Bonds behave in a rather erratic fashion; and Building Society shares and deposits are also somewhat erratic, but are clearly more favoured in the higher income groups. Commercial Bank deposits represent a big element in the liquid assets of the lowest income group; but in the next group they drop to 16 per cent of the total and rise consistently thereafter as income rises.

The analysis by occupation shows that manual workers keep over half their liquid assets in the two main savings banks (over a third in the Post Office and nearly a fifth in the Trustee Savings Bank); the salaried and self-employed however keep only a fifth of their liquid assets in these banks and the retired and unoccupied about a quarter. On the other hand, manual workers keep only a quarter of their liquid assets in Defence Bonds, the

FIG. 1. PERCENTAGE COMPOSITION OF LIQUID ASSET HOLDINGS AT VARIOUS LEVELS OF TOTAL LIQUID ASSET HOLDINGS.



Building Societies and the Commercial Banks, while the salaried and self-employed have nearly 60 per cent in these forms and the retired and unoccupied 53 per cent. Each group keep approximately the same percentage of their liquid assets in the form of Savings Certificates.

The analysis by age is erratic and has not been included.

Finally, we analyse the distribution of liquid asset holdings according to the total amount of liquid assets held. The data are illustrated in *Figure* 1.

It will be seen that certain sorts of assets are held in larger proportion by those who are poor in liquid assets while others are held in larger proportion by those who are rich in liquid assets. The ' poor in assets ' keep most of their assets in the Savings Banks; the ' rich in assets ' keep most of their assets in the Commercial Banks, in Building Societies and in Defence Bonds. The proportions of the two former types of asset diminish as total asset holding rises; the proportions of the three latter types of asset rise as total asset holding rises. The first group may be regarded, by analogy with the terms used in family budget studies, as ' necessities '; the second group as ' luxuries '. It is noteworthy that Savings Certificates do not fall definitely into either group; their universal popularity is once more demonstrated.

Concentration of liquid asset holdings

Spending units were ranked according to their total liquid assets and grouped into tenths, starting from the top downwards. These tenths will be described as ' liquid asset decines '.[1] Table X shows the percentage of total liquid assets held by each liquid asset decine. Sixty-four per cent are held by the top decine, 19 per cent by the second decine, and so forth. Spending units in the last five decines (the bottom 50 per cent) hold a negligible proportion of the total; and it is clear from this table that liquid asset holdings are very unequally distributed and that the inequality is much greater than in the case of income. The distribution of liquid assets shown in Table X is very similar to that found in the U.S.A. by the Survey of Consumer Finances. This comparison should not be pressed too far, however, because the components of liquid assets are different in Britain and the U.S.A.

TABLE X

Percentage of total liquid assets held by each spending unit liquid asset decine

Spending unit liquid asset decine	*Percent of total liquid assets held by each decine*	*Lowest holding in each decine (=decile)*
	%	£
Top ...	64	780
2nd ...	19	400
3rd ...	10	190
4th ...	4	90
5th ...	2	50
6th ...	1	18
7th ...	(1)	4
8th ...	(1)	—
9th ...	—	—
Bottom ...	—	—

(1) Less than 0.5 per cent.

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[1] The Survey Research Center use the term ' decile ' in this context; but this term already has another specific meaning in the language of statistics, namely, that value of a variable that stands on the boundary line between one tenth and the next. It seems preferable therefore to use a different term for a different concept and I have chosen the word ' decine ' as being the most convenient for this purpose. By analogy we can used the terms quartine, quintine and percentine to denote the aggregate value of a quarter, a fifth, or a hundredth part of the frequency of a variable after ranking.

Table XI shows the percentage of liquid assets of each sort that are held by each liquid asset decine. It will be seen that Post Office and Trustee Savings Banks deposits are less highly concentrated in the hands of large liquid asset owners, while the last three asset types are more highly concentrated. Savings Certificates occupy an intermediate position.

Although we cannot add together total liquid asset holdings and the value of stocks and shares owned, because the exact value of stocks and shares owned was not asked for, we can relate the data available on ownership of stocks and shares to the liquid asset decines. Table XII shows this relationship. It is evident that spending units with large holdings of liquid assets much more frequently own stocks and shares than those with small holdings; and for practical purposes stock and share ownership is limited to the top three liquid asset decines, *i.e.*, those whose liquid assets exceed about £200.

Finally, we shall consider the degree to which holdings of liquid assets are concentrated in the hands of spending units with large incomes. In Table XIII we show the percentage of liquid assets of each type held by the top income decine (the top tenth of incomes after ranking). In every case this group holds more than it would hold if every income decine held an equal amount, *i.e.*, 10 per cent. Of all liquid assets combined the top income decine holds 35 per cent; this is a little more than its proportionate share of total income, namely, 31 per cent.[1] Of some assets it holds less than this proportion, particularly deposits in the Post Office and Trustee Savings Banks. Of others it holds considerably more, particularly Commercial Bank deposits and Building Society shares and deposits. In each case, except the Building Society, the top income decine holds a smaller proportion of assets than the top liquid asset decine. This means that those who are rich in income are not the same people as those who are rich in liquid assets. In fact, only about a third of the spending units in the top income decine are also in the top liquid asset decine, and *vice versa*.

CHANGES IN LIQUID ASSET HOLDINGS

Table XIV shows the proportions of spending units who increased or decreased their liquid asset holdings in the year 1950–51. These figures do not tell us as much as a complete frequency distribution would; nor as much as the means and standard deviations would do. But since the standard deviations of these distributions are very large in relation to their means, it would be almost impossible to draw valid conclusions from a study of the means of sub-samples of these sizes. Nevertheless a comparison of the percentage of spending units in each group who showed an increase or a decrease in their liquid asset holdings will suggest some relationships.

The analysis of changes in total liquid assets by income groups shows that in the lower income groups (under £400) the proportion of spending units who drew down their assets exceeded the proportion who added to their assets, especially in the £200 to £399 group. On the other hand, in the

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[1] See the first article in this series, BULLETIN, Vol. 13, No. 9, p. 281.

TABLE XI

Concentration of liquid asset holdings, by liquid asset decines
(Percent of assets of each type held by each total liquid asset decine)

Spending unit liquid asset decine	*Post Office Savings Bank deposits*	*Trustee Savings Bank deposits*	*Savings Certificates*	*Defence Bonds*	*Building Society shares and deposits*	*Commercial Bank deposits*
Top	55	36	58	79	81	75
2nd	13	32	27	17	16	14
3rd	12	20	10	4	2	7
4th	12	5	3	(1)	1	2
5th	5	4	2	(1)	—	1
6th	2	2	1	—	—	1
7th	1	1	(1)	—	—	(1)
8th	(1)	(1)	(1)	—	—	(1)
9th	—	—	—	—	—	—
Bottom	—	—	—	—	—	—

(1) Less than 0.5 per cent.

TABLE XII

Ownership of stocks and shares, by liquid asset decines
(Percent of spending units in each decine)

Liquid asset decine	*Value of stocks and shares owned*			*Total*
	Nil	*Under £2,000*	*£2,000 and over*	
Top	50	30	20	100
2nd	61	23	16	100
3rd	90	6	4	100
4th	99	1	—	100
5th				
6th				
7th				
8th	100	—	—	100
9th				
Bottom				

TABLE XIII

Percent of liquid assets of each type held by top income decine

Type of liquid asset	*Holdings of top income decine as percent of total held by all*
All liquid assets	35
Post Office Saving Bank Deposits	23
Trustee Savings Bank Deposits	20
Savings Certificates	38
Defence Bonds	24
Building Society Shares and Deposits ...	69
Commercial Bank Deposits	49

TABLE XIV *Changes in total liquid asset holdings, by spending units of various types* (per cent of spending units of each type)

Characteristic of spending unit	*Change in total liquid asset holdings*				*All spending units*	
	Increase	*No change*	*Decrease*	*Not ascertained*	*Percent*	*No. in sample*
All spending units	25	41	33	1	100	416
Total income of spending unit :						
Under £200	18	58	24	—	100	69
£200 to £399	18	44	37	1	100	149
£400 to £599	30	35	33	2	100	105
£600 to £999	34	31	33	3	100	46
£1,000 and over	44	18	38	—	100	47
Occupation of head :						
All manual workers	*26*	*43*	*31*	—	*100*	*174*
All salaried and self-employed ...	*28*	*32*	*37*	*3*	*100*	*166*
Retired, unoccupied and unemployed	*18*	*47*	*34*	*1*	*100*	*76*
Age of head :						
18 to 29	35	35	30	1	100	81
30 to 39	31	29	37	2	100	83
40 to 49	18	39	41	1	100	79
50 to 59	20	55	25	1	100	68
60 to 69	26	42	32	1	100	61
70 and over	16	52	31	1	100	44

Note.—The period to which these changes refer is the twelve months preceding the date of interview. Interviews were made in April and May 1951.

top income group (£1,000 over) the proportion who added to their assets (44 per cent) slightly exceeded the proportion who drew down their assets (38 per cent). It seems from these figures that in this period the lower income groups were drawing down their assets while the upper income groups were adding to theirs.

The analysis by occupational groups shows no great differences between manual workers and the salaried and self-employed; in both groups the proportion who drew down their assets exceeded the proportion who added to their assets. Amongst the retired and unoccupied, however, the proportion who added to their assets (18 per cent) is below the general average.

The analysis by age group shows that the proportion who drew down assets was in excess of the proportion who added to these assets at each age except the youngest, namely, those aged 18 to 29. The excess of withdrawers over adders is at its greatest in the 40 to 49 age group and amongst the over 70's.

In Table XV changes in Post Office Savings Bank deposits are analysed separately. Here again we find that low income spending units were more frequently drawing out than putting in money, whilst among the high income spending units the opposite relation holds. The excess of depositors over withdrawers amongst the spending units with income of £1,000 and over is particularly marked.

The analysis by occupation is very similar to that shown for total liquid assets: here again the proportion of increased depositors amongst the retired and unoccupied is below average.

TABLE XV

Changes in deposits in the Post Office Savings Bank, by spending units of various types
(per cent of spending units of each type)

Characteristic of spending unit	*Change in deposits*				*All spending units*	
	Increase	*No change*	*Decrease*	*Not ascertained*	*Percent*	*No. in sample*
All spending units	15	68	14	3	100	416
Total income of spending unit :						
Under £200	7	72	18	3	100	69
£200 to £399	13	71	14	2	100	149
£400 to £599	15	66	15	5	100	105
£600 to £999	22	62	15	1	100	46
£1,000 and over	28	64	7	1	100	47
Occupation of head :						
All manual workers	*15*	*68*	*14*	*3*	*100*	*174*
All salaried and self-employed ...	*17*	*65*	*15*	*2*	*100*	*166*
Retired, unoccupied and unemployed	*9*	*72*	*17*	*2*	*100*	*76*
Age of head :						
18 to 29	26	58	16	—	100	81
30 to 39	28	59	8	5	100	83
40 to 49	10	67	17	6	100	79
50 to 59	9	80	8	3	100	68
60 to 69	15	74	10	1	100	61
70 and over	12	69	18	1	100	44

The analysis by age groups is somewhat erratic; but it seems clear that the younger age groups were more frequently adding to their deposits than drawing them down and the older age groups were in the opposite position.

In Table XVI we give the analysis of changes in Trustee Savings Bank deposits. The figures are all somewhat erratic and our interpretation of them must therefore be cautious. What seems clear however is that the relationships are not the same as in the case of the Post Office. Firstly, the analysis by income group suggests that it is the lower income groups (under £600) who are more frequently adding to their deposits in the Trustee Savings Bank than the upper income groups. This is the direct opposite of the position in the Post Office. Secondly, we find very few of the retired and unoccupied who have accounts at the Trustee Savings Savings Bank; and of these more are adding to their deposits than are withdrawing from them. Thirdly, in the analysis by age group, whereas the younger age groups are more often adding to their deposits than substracting from them (as we would expect *a priori*) there is no marked tendency for the older age groups to withdraw their deposits. All these relationships are consistent with the fact that the Trustee Savings Bank is of more recent origin than the Post Office Savings Bank; that its depositors are therefore of younger age and lower income group ; and that since it has fewer of the elderly and the retired amongst its depositors it is not yet losing much money through the withdrawal of deposits by these groups.

TABLE XVI

Changes in deposits in the Trustee Savings Bank, by spending units of various types
(per cent of spending units of each type)

Characteristic of spending unit	*Change in deposits*				*All spending units*	
	Increase	*No change*	*Decrease*	*Not ascertained*	*Percent*	*No. in sample*
All spending units	8	83	8	1	100	416
Total income of spending unit:						
Under £200	10	86	3	1	100	69
£200 to £399	5	85	10	—	100	149
£400 to £599	14	73	11	2	100	105
£600 to £999	5	92	3	—	100	46
£1,000 and over	5	87	7	2	100	47
Occupation of head:						
All manual workers	*8*	*82*	*9*	—	*100*	*174*
All salaried and self-employed ...	*11*	*78*	*9*	*2*	*100*	*166*
Retired, unoccupied and unemployed	*4*	*93*	*2*	*1*	*100*	*76*
Age of head:						
18 to 29	11	83	6	—	100	81
30 to 39	14	74	9	2	100	83
40 to 49	7	78	15	1	100	79
50 to 59	8	85	6	1	100	68
60 to 69	4	91	5	—	100	61
70 and over	4	94	2	1	100	44

The analysis of changes in the other types of asset is not very instructive and no tables are published. The principal difficulty is that very few spending units either increased or decreased their holdings of these sorts of assets, except in the case of Commercial Bank deposits; and in this case figures showing the proportions who increased or decreased their deposits are not in themselves very significant.

TABLE XVII

Changes in total liquid asset holdings, by value of durables acquired in past 12 months
(per cent of spending units of each type)

Value of durables acquired	*Percent of spending units in group*	*Change in total liquid asset holdings*				*All spending units*	
		Increase	*No Change*	*Decrease*	*Not ascertained*	*Percent*	*No. in sample*
None specified ...	65	26	45	28	1	100	266
Up to £100	27	22	38	38	2	100	110
£100 and over ...	8	29	7	64	—	100	40
Total	100	25	41	33	1	100	416

Note.—The durable goods covered by this table were limited to certain specific types mentioned by the interviewer or any others costing £25 or more. The list was: cars, motorbikes, radio sets, television sets, refrigerators, washing machines and vacuum cleaners. The other goods were principally other household appliances and furniture. Clothing and soft goods were excluded. The value recorded was the cash price, not the amount actually paid up to the time of interview. The value of any goods of a similar type sold during the year was deducted from the total.

We draw this section to a conclusion with a table showing the relation between changes in spending units' total liquid asset holdings and their expenditure on durable goods during the preceding 12 months (Table XVII). The definition of durable goods covered is given in a footnote to the table. The table shows that spending units who purchased durables of the types specified more frequently drew down their liquid assets than those who did not purchase such durables. The relationship is particularly marked in the case of those who bought £100 worth or more; the proportion of these spending units who drew down their assets was about twice as great (64 per cent) as the average (33 per cent). The period covered by the survey was one in which there was accelerated consumer buying of household goods, especially in the first quarter of 1951, and it seems not unreasonable to suggest, from the evidence of the Oxford survey, that much of this buying, especially the larger purchases, was financed out of liquid assets.

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(*The final paper in this series will analyse saving habits*)